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ABSTRACT

Between 1960 and 1972 fundamental shifts have taken place in the relative levels of support provided to different research and development programs. The first half of the 1960's witnessed an unprecedented growth in Federal funding of R&D; this growth was followed by a period when funding leveled off and then declined. For 1972, however, the proposed budget for Federal research and development indicates a significant reversal of the downward trend. Agencies other than those concerned with defense, space, and atomic energy are scheduled to obligate 23% of the 1972 R&D total, compared with 9% in 1960. These are agencies that are devoted to health and education services, the reduction of poverty, the improvement of transportation and communication, the prediction of the weather, better management of crops, forests, livestock, mining, and fisheries, and the preservation of a sound environment. This report is the 20th in an annual series that has recorded the data on which the foregoing trends are based. It provides comprehensive statistical information on the size and scope of Federal obligations for scientific activities and the types of institutions and purposes to which such funds are directed. (Author/HS)

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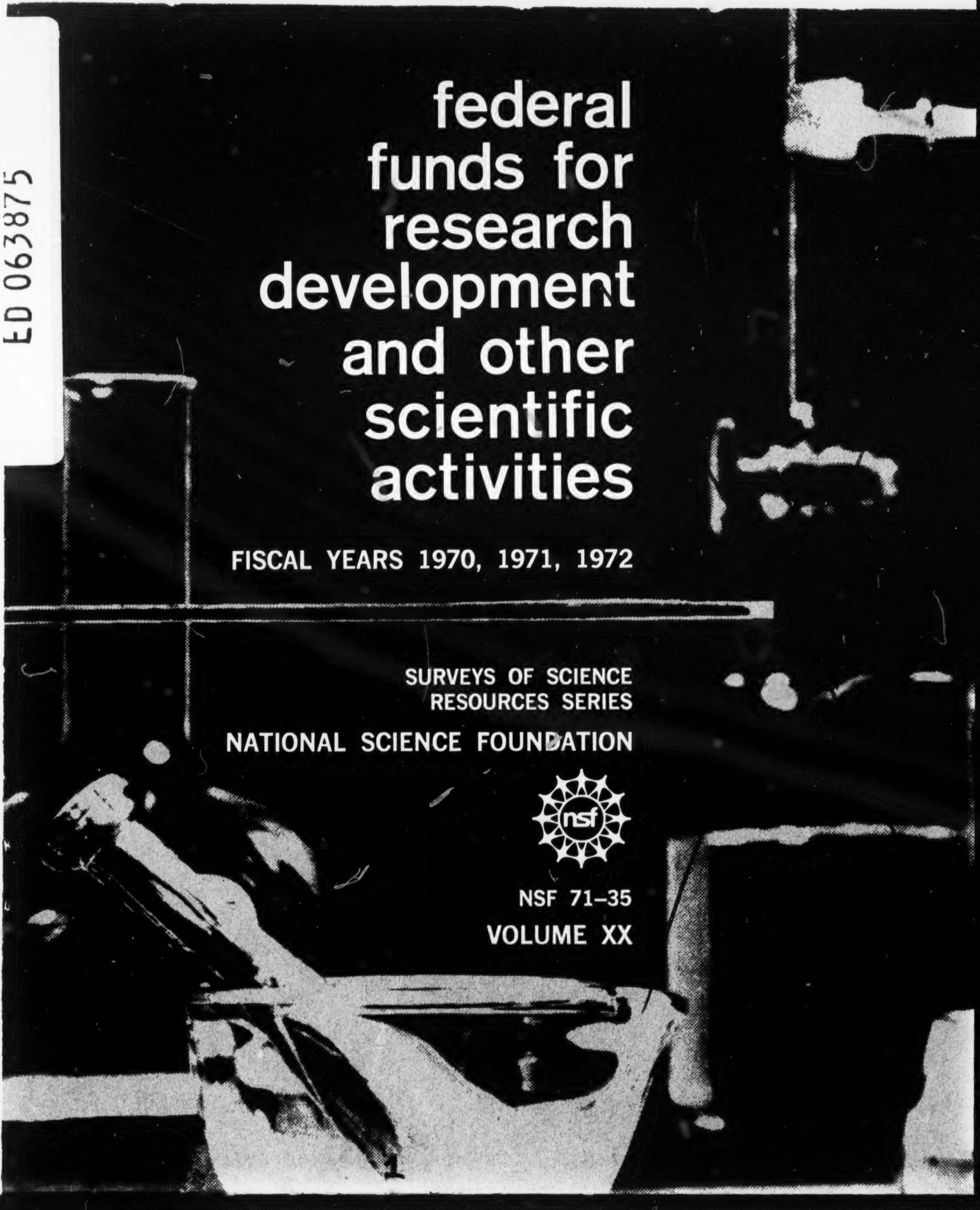

federal funds for research development and other scientific activities

FISCAL YEARS 1970, 1971, 1972

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EDUCATION & WELFARE
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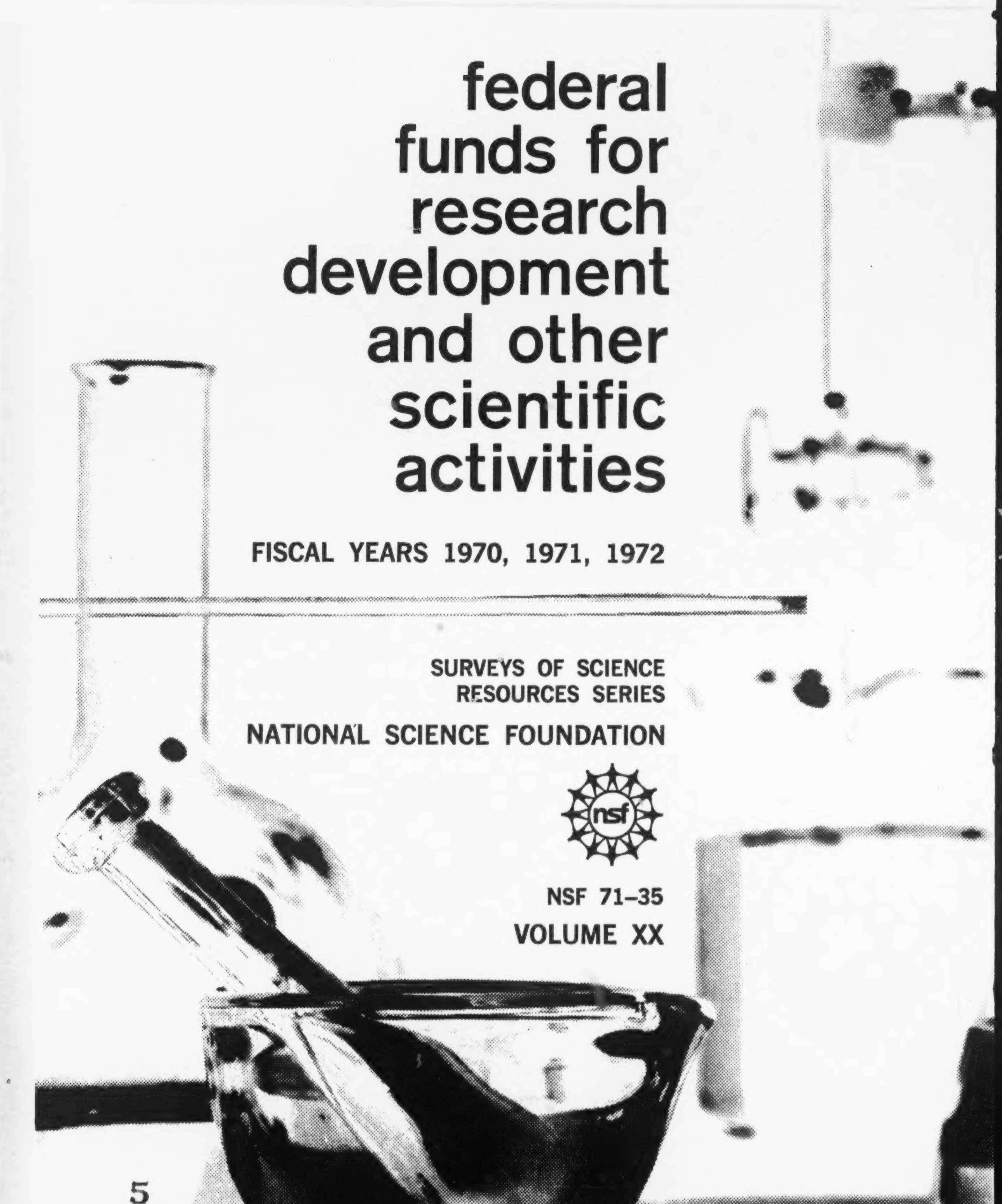

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foreword

Today the relationship of science to society is being reexamined. Government instruments for the support and use of science are being reorganized or created. In such a period data are indispensable for the analysis and study of the various elements that make up the whole structure of science. The **Federal Funds** series provides such data.

The first half of the 1960's witnessed an unprecedented growth in Federal funding of research and development: this growth was followed by a period when funding leveled off and then declined. For 1972, however, the proposed budget for Federal research and development indicates a significant reversal of the recent downward trend. While R&D expenditures as a share of total budget outlays have steadily declined from the 1965 high of 13 percent to a 1972 estimate of 7 percent, this change is more a reflection of the growth of the non-R&D portion of the budget than a diminution in R&D programs.

Between 1960 and 1972 fundamental shifts have taken place in the relative levels of support provided to different programs. Agencies other than those concerned with defense, space, and atomic energy are scheduled to obligate 23 percent of the 1972 R&D total, compared with 9 percent in 1960. These are agencies that are devoted to health and education services, the reduction of poverty, the improvement of transportation and communication, the prediction of the weather, better management of crops, forests, livestock, mining, and fisheries, and the preservation of a sound environment.

This report is the 20th in an annual series that has recorded the data on which the foregoing trends are based. It provides comprehensive statistical information on the size and scope of Federal obligations for scientific activities and the types of institutions and purposes to which such funds are directed.

The Foundation extends its appreciation to the staff members of agencies responding to the **Federal Funds** survey for their cooperation in meeting survey requirements. The report was prepared under the overall guidance of Charles E. Falk, Director, Division of Science Resources Studies, and the general supervision of Thomas J. Mills, Deputy Director.

W. D. McElroy
Director
National Science Foundation

October 1971

acknowledgments

This report was prepared in th
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the direction of Benjamin Olsen, Stu
Major responsibility for interpreting
of the report was taken by Jane Pu
assisted in reviewing the data, and D
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This report was prepared in the Division of Science Resources Studies under the special guidance of Kenneth Sanow, Head, Statistical Surveys and Reports Section. The survey was conducted and the report published under the direction of Benjamin Olsen, Study Director, Government Studies Group. Major responsibility for interpreting the data and for organization and writing of the report was taken by Jane Pugh and Eleanor Stoddard. Wayne Zajac assisted in reviewing the data, and Dorothy Knott participated in the preparation of statistical material.

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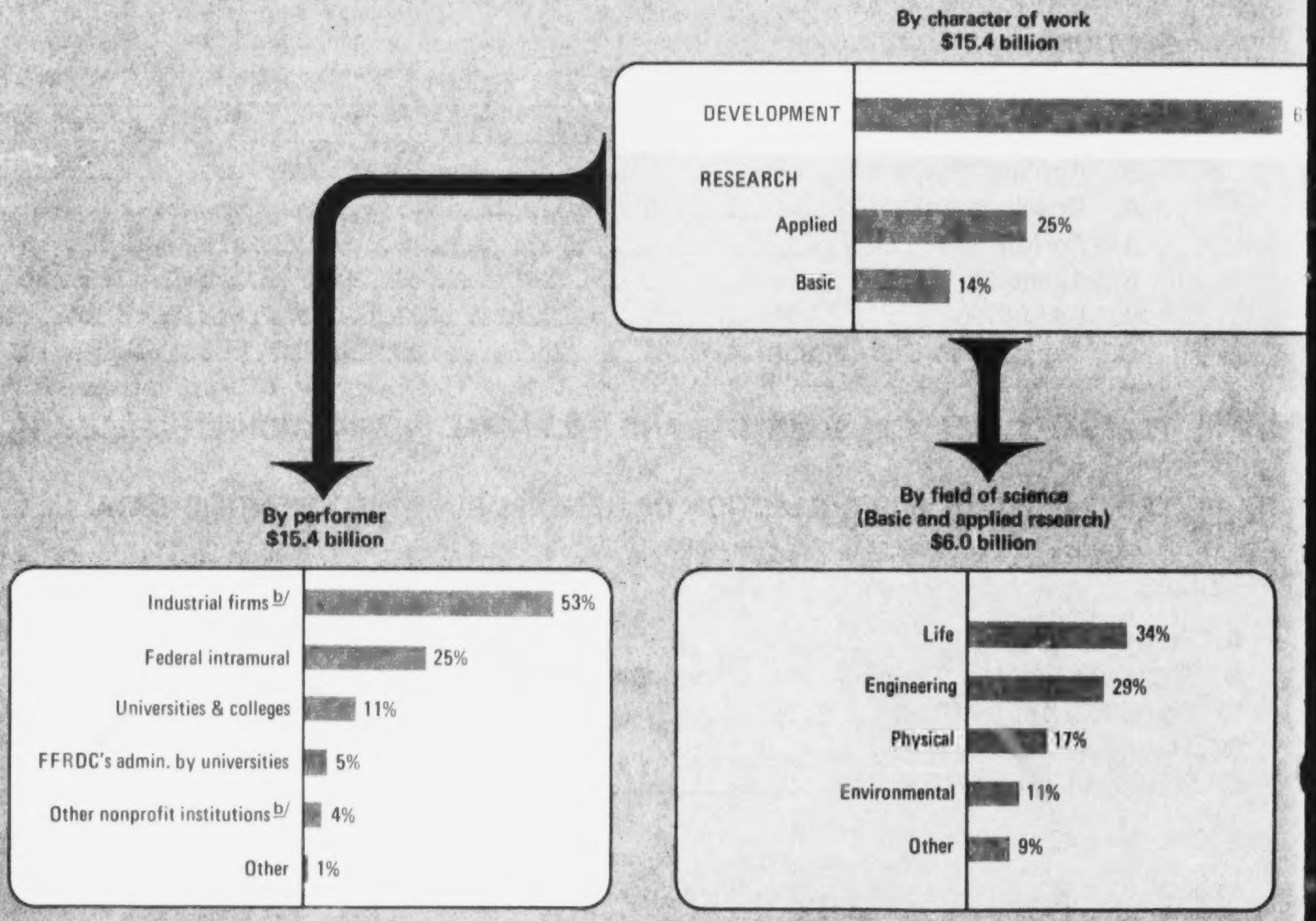
NOTE In all tables and charts of this report, details may not add to totals because of rounding. Percentages appearing in the text were calculated on the basis of thousands of dollars and may differ from percentages based on figures rounded to millions of dollars.

Distribution of Federal obligations for research and development,[a] FY 1971 (est.)



[a] Excludes R&D plant.

[b] Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

SOURCE: National Science Foundation

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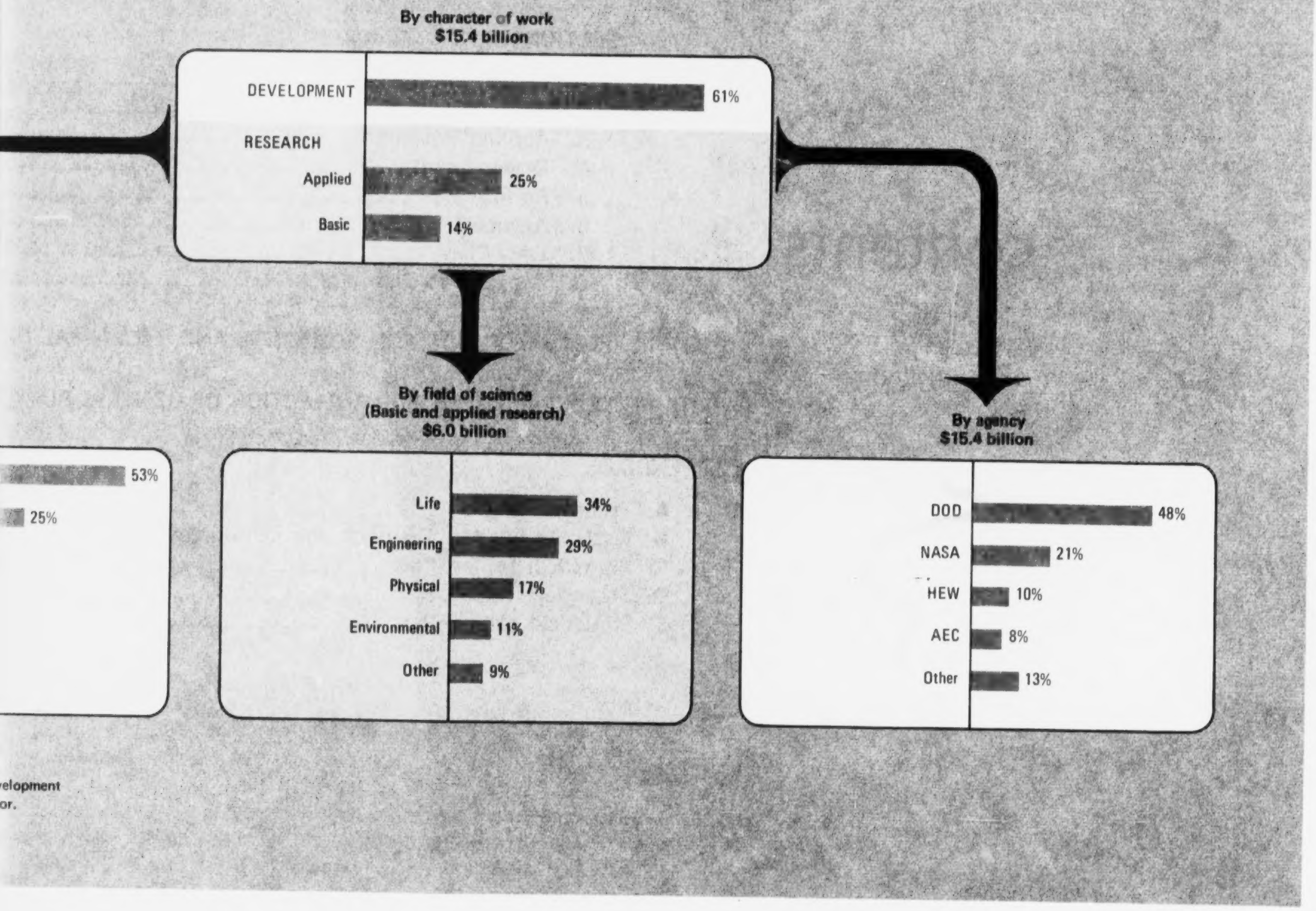

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highlights

Federal Funds for Research and Development

Federal obligations for research and development (plant excluded) totaled $15.3 billion in 1970, a low for recent years. A slight rise in the R&D total to $15.4 billion was expected in 1971, although in terms of constant dollars this figure represents a 5-percent decrease.

However, for 1972 the R&D portion of the budget, as requested, reflects a significant reversal of the recent downward trend. The R&D total of $16.7 billion marks an all-time high in current dollars.

Basic Research

Basic research obligations are scheduled to rise from $2.1 billion in 1970 to $2.2 billion in 1971 and $2.4 billion in 1972. For the first time in the past decade, Federal support for basic research declined in 1970, but the basic research totals in 1971 and 1972 should establish new records—although in constant dollars a slight decrease is shown between 1970 and 1971 (less than one-half of 1 percent).

In 1971 HEW and NSF contributed importantly to the indicated rise. In 1972 the same two agencies and NASA are the chief factors.

For many years five agencies—NASA, HEW, NSF, AEC, and DOD—have represented the bulk of the Federal basic research effort. In 1971 they were expected to account for 87 percent of the total.

Among all agencies, NASA has led since 1961 in basic research support, and in 1971 its share of total Federal basic research obligations was 29 percent. The chief cause of NASA's predominance lies in the nature of its experiments, which require outlays for costly expendable equipment like launch vehicles and spacecraft.

HEW has been the second largest support agency since 1963; its share of the total in 1971 was 21 percent.

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Applied Research

Obligations for applied research totaled $3.5 billion in 1970 and were scheduled to rise to $3.8 billion in 1971, an 8-percent increase. In constant dollars, however, the increase is only 3 percent.

For 1972 the applied research total is expected to reach $4.2 billion, another all-time high in current dollars.

In 1971 gains were registered by almost all major agencies, DOD and AEC excepted, and in 1972 all agencies show increases or practically no change.

Three agencies—DOD, HEW, and NASA—continue to dominate the Federal applied research effort. In 1971 they were expected to account for 78 percent of the Federal agency total, although applied research programs of several other agencies are growing rapidly, especially those of DOT, Commerce, EPA, and NSF.

Development

Development obligations totaled $9.7 billion in 1970. In 1971 they were expected to amount to $9.4 billion, a 3-percent decline that continues the downward trend started in 1968. If constant dollars are used, the decline becomes 8 percent.

In 1972 the Federal development total is scheduled to rise to $10.0 billion, about the same level as 1966.

Three agencies—DOD, NASA, and AEC—are most prominent in the Federal development effort in the 1960–72 period. In 1971 they represented an estimated 92 percent of the Federal development total, and DOD alone represented an estimated 63 percent of the total. NASA's share has been declining since 1965 and was expected to be 19 percent in 1971.

Chief impetus to the 1972 increase is provided by DOD. Other agencies contributing to the rise are HEW, the Postal Service, EPA, and Interior. Declines in development obligations in 1972 are registered by NASA, AEC, and DOT.

R&D Plant

Obligations for R&D plant totaled $524 million in 1970; they were expected to reach $659 million in 1971 but to decrease to $588 million in 1972. Support by most agencies for R&D plant is declining or leveling off. The chief exception is provided by DOT's construction program, most of it carried out at the High-Speed Ground Test Center in Pueblo, Colo.

In 1971 almost 80 percent of the R&D plant total represented the funding of two agencies—AEC and DOD.

Performers

Federal intramural R&D performance has risen steadily year after year even at times when support to other sectors was declining. In the 1970–72 period, growth is the result of increased intramural work on the part of most of the agencies. Currently, approximately 25 percent of all Federal research and development is represented by intramural performance, a higher level than the 18- to 23-percent range that prevailed in the 1960's.

In 1971 industrial firms (including FFRDC's) were expected to account for 53 percent of all Federal R&D performance, contrasted with 62 percent in 1967. DOD, NASA, and AEC remain the chief agency contractors for industrial R&D resources.

In 1970 a 4-percent drop occurred in Federal R&D obligations to universities and colleges. However, in the next two years obligations were scheduled to rise to new highs. The share of this sector in the Federal R&D total was an estimated 11 percent in 1971.

FFRDC's administered by universities were expected to perform 5 percent of all Federal research and development in 1971, about the same share they have accounted for since 1961.

Other nonprofit institutions, including FFRDC's, have represented about 4 percent of the total since 1965 and continue at that level in the current budget period.

Agencies

Although total Federal R&D obligations are scheduled to increase 9 percent from 1970 to 1972, two of the important R&D agencies—NASA and AEC—reveal continuing decreases.

However, NASA's estimate for 1972 represents the smallest reduction since the downward trend for this agency that started in 1967. Increases in a number of key programs—such as Skylab and the space shuttle, the Viking unmanned exploration of Mars, and the Grand Tour unmanned missions to the outer planets—almost offset decreases in the Apollo program.

AEC's decreases stem largely from cutbacks in the underground testing of nuclear weapons, in space propulsion systems, and in space electric power development.

DOD's sizable increase in 1972 covers work on the B–1 advanced strategic bomber, the Safeguard antiballistic missile system, the undersea long-range ballistic missile system (ULMS), the F-15 air superiority fighter, the A-X close air support aircraft, and the F-5 international fighter. Partially offsetting the increases are the phasing down or completion of such undertakings as the F-14 fighter/interceptor, the Minuteman ICBM system, the Poseidon fleet ballistic missile, and the S-3A antisubmarine warfare aircraft.

HEW reveals important expansion in R&D work in the current period. Increases are brought about by vocational education research and innovative R&D programs in the Office of Education, research efforts in heart disease and cancer in the National Institutes of Health, and the R&D efforts of the new Office of Child Development, to name some of the more outstanding programs.

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The agencies other than the leading 4 are expected to increase their joint share of the Federal R&D total from almost 11 percent in 1970 to 14 percent in 1972, reflecting Federal response to national needs in such areas as transportation, support of fundamental science, food production and use, environmental control, urban management, and crime abatement.

Fields of Science

Between 1970 and 1972 the relative shares of the life sciences, the environmental sciences, and the social sciences show a tendency to rise while the shares of the physical sciences and engineering tend to fall. Psychology and mathematics remain stable.

In 1971 the engineering sciences were expected to account for 34 percent of the Federal research total; the life sciences 29 percent, the physical sciences 17 percent, and the environmental sciences 11 percent. The social sciences were expected to make up 5 percent of the total, and psychology and mathematics each 2 percent.

Geographic Distribution

Federal R&D performance tends to concentrate in certain States. Five geographic surveys have been conducted, starting with 1963, and they reveal that the 10 States leading in Federal R&D support received 71 percent of the total obligations in each year surveyed—1963, 1965, 1968, 1969, and 1970. These 10 leaders were drawn from a group of the same 11 States, year after year. The three leading States in each year surveyed were California, New York, and Maryland, in that order. However, the share of California had dropped from 35 percent of the total in 1963 to 26 percent by 1970.

Approximately one-half the States received as much as 1 percent of the Federal R&D total in each year. The 26 such States in 1970 accounted for 95 percent of overall obligations.

introduction

Federal funding for research and development over the past one and one-half decades reveals a changing pattern in levels of activity. From 1955 to 1967 total Federal R&D obligations rose steadily although some weakening in public support could be detected by the mid-1960's. At that time the rate of yearly growth began to slacken and the ratio of the R&D portion of the budget to the total budget stopped rising and began to fall.

In the second half of the 1960's R&D budgets had to compete with other rapidly growing areas of Federal support, the result of increased needs in such fields as defense, education, health, and urban management. From 1967 to 1970 total Federal R&D obligations declined in absolute terms and relative to obligations for other Federal activities taken as a whole.

However, overall Federal R&D funding now shows promise of turning upward. The R&D total requested in the 1972 budget would, if realized, mark an all-time high in current dollars. To a large extent this higher figure results from recognition that research and development will have to be applied to solving a range of social problems, including the problems created by technology.

As in the past, the process of examining the relationship of science to society is continuing. Presidential study groups, congressional committees, and others in policymaking positions have been reviewing the entire organizational structure of Government science support; they have been considering how science can best meet national problems and how technological change can be better foreseen and controlled.

Bills to create technology assessment agencies have been introduced in both the House and the Senate, and the National Science Foundation has recently embarked on the RANN (Research Applied to National Needs) program, centralizing and expanding problem-focused research support. The Foundation is also encouraging research with a high potential for providing fundamental under-

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In such a period of transition data are essential. They form the prime basis for analysis and for choice among alternatives. The **Federal Funds** report provides some fundamental data on agency R&D funding. In the course of time new data elements have been added to the scope of the report so that it now presents R&D and R&D plant expenditures by agency from 1940 through 1972 and R&D and R&D plant obligations, 1947 through 1972, plus R&D obligations data for the current (1970-72) period in considerable detail.

In fiscal year 1971 the establishment of the National Oceanic and Atmospheric Administration within the Department of Commerce and the Environmental Protection Agency provided new mechanisms to help meet that crisis. Such actions and the augmented program for cancer cure within the National Institutes of Health are further evidence of attempts to relate science to the needs of society. The attention of decisionmakers is also turning to ways to increase research and development in industry so that the Nation can raise economic productivity and maintain a competitive position in international markets.

This detail includes Federal R&D obligations by character of work: basic research, applied research, and development. It also covers data by performers of the work: Federal intramural, industrial firms, universities and colleges, other nonprofit institutions, FFRDC's (Federally Funded Research and Development Centers), foreign performers, and others. It includes research obligations by major and detailed fields of science. The four principal measures of R&D activity are cross-referenced in every combination permitted by the data. Obligations are given for scientific and technical information activities and the collection of general-purpose scientific data. Also in the current issue Federal R&D and R&D plant obligations by State are shown for 1970.

Another perspective on Federal R&D funding has been provided in a recent report of the National Science Foundation, **An Analysis of Federal R&D Funding by Budget Function, 1960–72** (NSF 71-25). This report took the R&D expenditure data submitted by the agencies for the **Federal Funds** surveys and regrouped them by Federal budge functions and subfunctions. The study compare R&D expenditures by budget function with tota Federal outlays for each function and analyze trends and developments. It is designed to hel meet the growing need for data by which to dete

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PART I

FEDERAL FUNDS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT

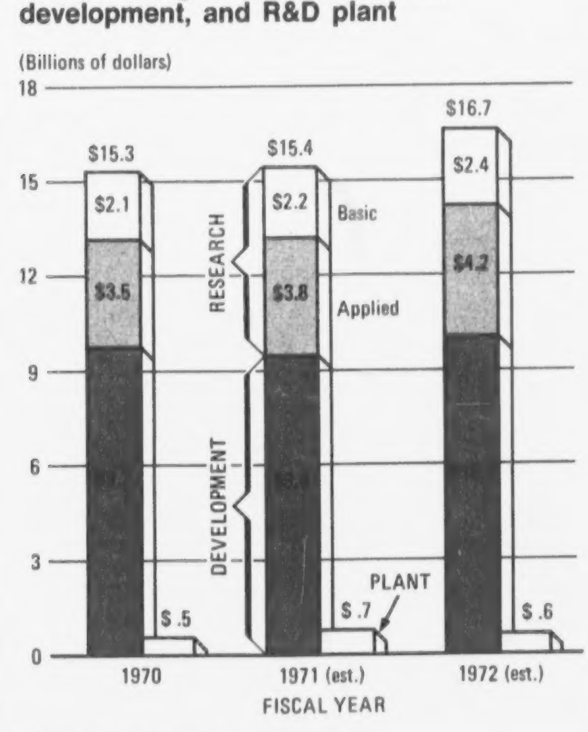
SECTION 1.

levels and trends

After a period of decline that began in 1968, overall Federal R&D funding appears to have reached a turning point. From 1970 to 1972 a 9-percent increase is estimated. The 1970 total of $15.3 billion in actual obligations established a low for recent years, and the R&D total was expected to be only slightly higher in 1971 at $15.4 billion, but the total requested in the President's budget for 1972 amounted to $16.7 billion. If the budget request is realized, 1972 will mark a new high in current dollar funding.

If analyzed from the point of view of level of activity which can be supported by these funds, a somewhat different, though still improved, picture emerges. The use of the GNP implicit price deflator would result in a 5-percent decrease between 1970 and 1971. Fiscal year 1972 would still see an upturn even with the application of any reasonably estimated deflator. However, the use

Federal obligations for research, development, and R&D plant



SOURCE: National Science Foundation

SECTION 1.

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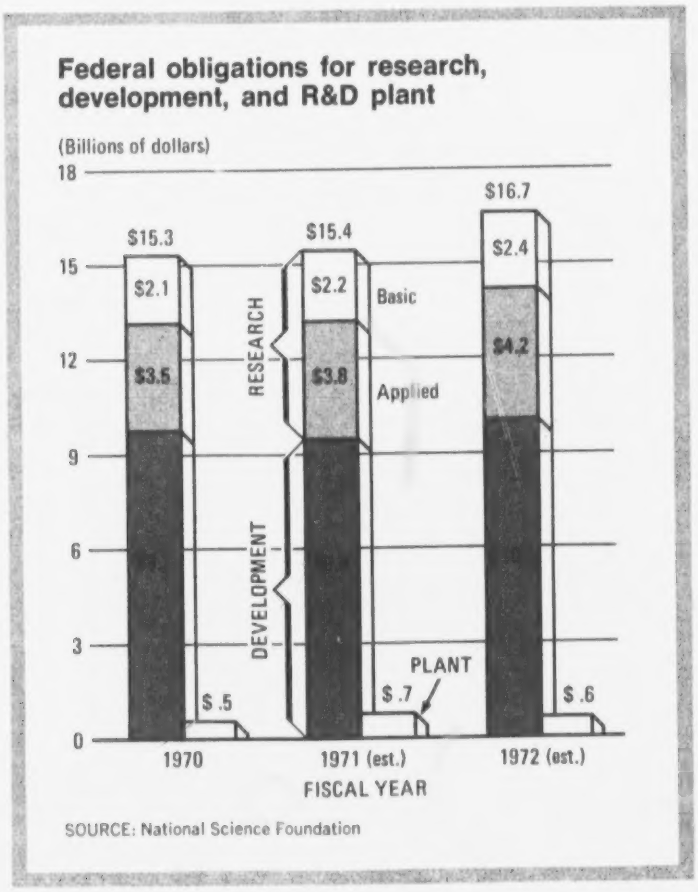
Federal obligations for research, development, and R&D plant



SOURCE: National Science Foundation

R&D PLANT

In 1970 R&D plant obligations of $0.5 billion reached the lowest point since 1960. The estimated increase to $0.7 billion for 1971 is not expected to be sustained in 1972; that year only $0.6 billion in R&D plant obligations is requested. R&D plant lacks the continuity of funding evidenced by R&D programs and reveals a special vulnerability to cutbacks in periods of Government economizing.

RELATIONSHIP TO TOTAL BUDGET

The combined R&D and R&D plant obligations for 1970, 1971, and 1972 are $15.9 billion, $16.0 billion, and $17.2 billion, respectively. In terms of expenditures the totals are slightly different, as the table shows. However, expenditures can be directly related to Federal budget outlays, and the R&D and R&D plant share of total budget outlays reveals a steady decline from the 1965 high of 12.6 percent to a 1972 estimate of 7.1 percent, the lowest ratio since 1959. The downward trend for the latest 2 years is a reflection of the growth of the non-R&D portion of the budget rather than a diminution in R&D programs.

TRENDS IN RESEARCH AND DEVELOPMENT

From 1960 to 1967 Federal R&D obligations grew steadily. They doubled between 1960 and 1966, more because of growth in the programs of the National Aeronautics and Space Administration (NASA) than any other single factor. Although the NASA curve began to turn down the next year, a sizable increase in R&D obligations for the Department of Defense (DOD) and smaller increases for other agencies resulted in a Federal R&D total in 1967 that was the highest yet attained. It marked the end of a long-term growth cycle.

Federal obligations and expenditures, fiscal years 1940-72

[Dollars in millions]

Fiscal years	Total budget outlays[b]	Research, development, and R&D plant[a]		
		Obligations	Expenditures	Expenditures as percent of total budget outlays
1940	$ 9,589	(c)	$ 74	0.8
1941	13,980	(c)	198	1.4
1942	34,500	(c)	280	0.8
1943	78,909	(c)	602	0.8
1944	93,956	(c)	1,377	1.5
1945	95,184	(c)	1,591	1.7
1946	61,738	(c)	918	1.5
1947	36,931	$ 691	900	2.4
1948	36,493	868	855	2.3
1949	40,570	1,105	1,082	2.7
1950	43,147	1,175	1,083	2.5
1951	45,797	1,812	1,301	2.8
1952	67,962	2,194	1,816	2.7
1953	76,769	3,361	3,101	4.0
1954	71,138	3,039	3,148	4.4
1955	68,503	2,745	3,308	4.8
1956	70,461	3,267	3,446	4.9
1957	76,748	4,389	4,462	5.8
1958	82,575	4,906	4,991	6.0
1959	92,111	7,123	5,806	6.3
1960	92,230	8,080	7,744	8.4
1961	97,802	9,607	9,284	9.5
1962	106,830	11,069	10,381	9.7
1963	111,314	13,663	11,999	10.8
1964	118,585	15,324	14,707	12.4
1965	118,431	15,746	14,889	12.6
1966	134,654	16,179	16,018	11.9
1967	158,352	17,149	16,842	10.6
1968	178,862	16,525	17,030	9.5
1969	184,556	16,306	16,348	8.9
1970	196,588	15,854	15,736	8.0
1971 (estimated)[d]	212,755	16,046	15,988	7.5
1972 (estimated)[d]	229,232	17,250	16,315	[e]7.1

[a] Beginning in fiscal year 1953 amounts for both obligations and expenditures include pay and allowance of military personnel in research and development.

[b] "Outlays" include expenditures plus net lending. Data through fiscal year 1953 are in terms of the "Consolidated Cash Statement" and data beginning with fiscal year 1954 are in terms of the "Unified Budget." For purposes of providing trend information the data are considered to be reported on a generally comparable basis.

[c] Not available.

[d] These estimates are based on amounts shown in **The Budget, 1972** and do not reflect congressional appropriations or changes made by executive action subsequent to budget submission at the mid-point of fiscal 1971.

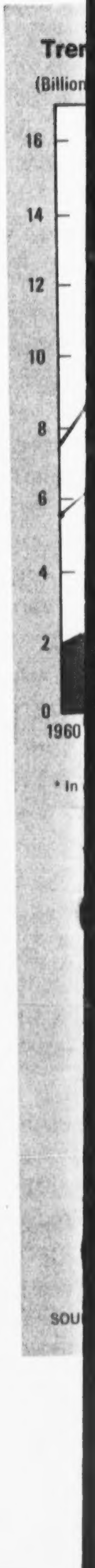
[e] The ratio of 7.1 percent given as the R&D portion of the Federal budget in 1972 is computed from the total budget figure of $229 billion. In another National Science Foundation report, **An Analysis of Federal R&D Funding by Budget Function, 1960–72**, the ratio of the R&D portion of the 1972 budget is shown as 7.4 because the budget figure used in that study ($211 billion) excluded interest.

NOTE: R&D data for fiscal year 1952 and subsequent years are based on surveys of the National Science Foundation. Prior data were prepared by the Bureau of the Budget. Since the NSF surveys began, agencies have submitted revised data when necessary to maintain historical comparability with reporting practices of the latest period.

Development still made up by far the largest portion of the total, but the rate of growth for research had been higher than that for development so that the development share dropped from 74 percent to 68 percent of the R&D total. Within the research total, basic research had grown more rapidly than applied research, and its share rose from 8 percent to 12 percent of the R&D total, while applied research moved only from 18 percent to 20 percent.

A decline then set in, which lasted from 1967 to 1970. Obligations for Federal research and development fell at an average annual rate of 2 percent, influenced principally by the decrease in development funding. When constant dollars are used, the average annual decline is 7 percent. The average annual rate of decline for development in those years was 5 percent. However, research obligations increased slightly, at an average rate of 2 percent per year. Only in one year (from 1968 to 1969) did research funding register a decrease, and it was relatively small. When constant dollars are used, the rate of decline for development is steeper, and research for the 1967–70 period shows a decline instead of an increase.

In 1971 the Federal R&D total scarcely changed. The chief retarding effect on overall R&D growth since 1967 had been caused by the heavy drop in development funding, mostly from the curtailment of NASA programs but in some years from reductions by DOD. On the other hand, research had shown an almost steady growth that was produced by the combined efforts of almost all the agencies. These included the Atomic Energy Commission (AEC) and the Department of Health, Education, and Welfare (HEW) in 1968 and 1969, DOD and NASA in 1970, and all major agencies except AEC in 1971. In 1972 NASA funding, which has so powerfully affected the R&D total since the early 1960's, shows less relative change than in any year since 1966.



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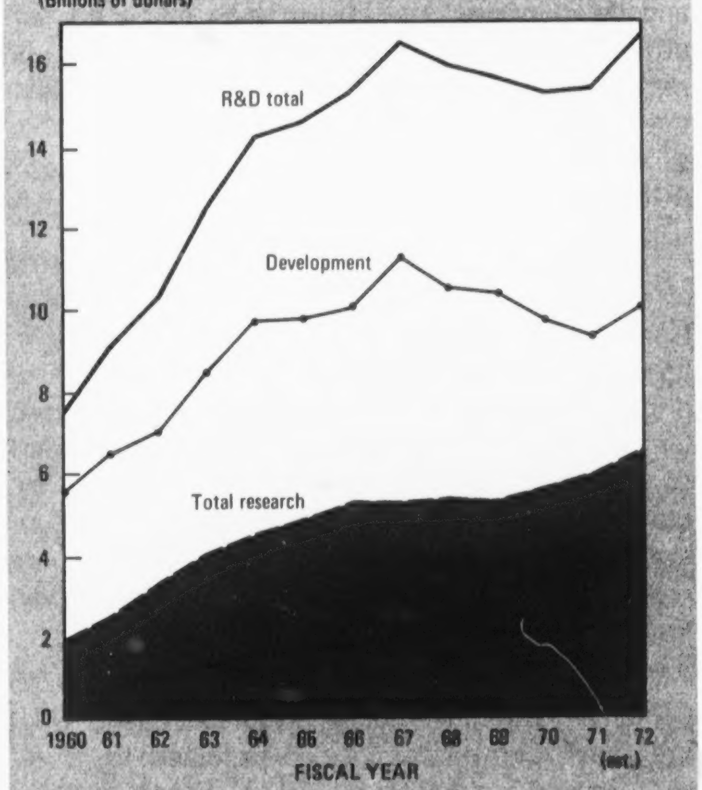
Trends in Federal R&D obligations *

(Billions of dollars)



* In current dollars

Average annual growth rate (percent)				
Character of work	1960-67	1967-70	1970-71	1971-72
Current dollars				
R&D total	12	–2	a/	8
Research	15	2	7	11
Basic research	19	1	5	11
Applied research	14	3	8	11
Development	10	–5	–3	7
Constant dollars b/				
R&D total	10	–7	–5	c/
Research	13	–2	2	c/
Basic research	17	–4	d/	c/
Applied research	12	–2	3	c/
Development	9	–9	–8	c/

a/ Less than 0.5 percent increase.
b/ Based on the GNP implicit price deflator.
c/ Not available.
d/ Less than 0.5 percent decrease.

SOURCE: National Science Foundation

In 1972 both research and development turn upward. However, the development share in 1972 is expected to be only 60 percent of all research and development, the lowest such share on record. Basic research and applied research are expected to be 14 percent and 26 percent, respectively.

AGENCIES

In the period from 1960 to 1972 the number of agencies reporting R&D programs has risen from 24 to 33, and certain fundamental shifts have taken place in the relative contributions of different agencies to the total Federal R&D effort. Certain agencies are associated with broad areas of R&D activity—such as weaponry, space exploration, health, atomic energy development, or the advancement of science **per se.** Their funding reflects relative national priorities at any given time.

For example, in 1960 DOD accounted for 76 percent of all the funds allotted to Federal R&D programs, but this agency is expected to represent only 50 percent by 1972. Other national needs taken together are now recognized as equaling those of the military in their claims on Federal R&D resources.

NASA rose from a share of 5 percent of the R&D total in 1960 to a high of 34 percent in 1965, but was expected to fall back to 19 percent in 1972. This agency has declined steadily in funds since 1966 as other national programs have gained acceptance over space exploration.

AEC, which was third in size of funding until 1971, has also declined relatively. AEC's share fell in the 1960–72 period from 10 percent to an anticipated 8 percent, even though R&D funding for this agency showed greater stability than for any other agency. In 1971 AEC's estimated R&D obligations were smaller than those for HEW for the first time on record. The same situation is expected to be repeated in 1972.

Federal obligations for research and development, by agency

[Dollars in millions]

Agency	Actual		Estimates	
	1960	1970	1971	1972
Total	$7,552	$15,330	$15,387	$16,662
Department of Defense	5,712	7,360	7,420	8,332
National Aeronautics and Space Administration	369	3,800	3,248	3,189
Department of Health, Education, and Welfare	320	1,221	1,480	1,635
Atomic Energy Commission	762	1,346	1,307	1,251
Department of Transportation	--------	317	437	483
National Science Foundation	75	289	345	494
Department of Agriculture	126	281	303	314
Department of the Interior	64	158	185	204
Department of Commerce	31	122	158	182
Environmental Protection Agency	--------	89	116	144
Office of Economic Opportunity	--------	123	116	100
Other agencies	94	224	272	334

In 1960 the combined shares of DOD, NASA, and AEC represented 91 percent of the Federal R&D total, most of it directed to development. But gradually the size of their combined share has dropped so that in 1972 it is expected to make up 77 percent of all Federal R&D obligations.

In the current period, the programs of these three agencies still revolve largely round the development of heavy machinery, costly equipment, and complex instrumentation. DOD is the only one to show an actual increase in obligations from 1970 to 1972, and a large portion of this increase is in aircraft development, e.g., naval aircraft, the Air Force F-15, the B-1 advanced strategic bomber, the F-5 fighter, and a range of helicopters; another large portion in ships, e.g., hydrofoil craft, antisubmarine warfare sensors, shipboard tactical communications, etc.; and another portion in "other" equipment, including the Airborne Warning and Control System, electronic warfare countermeasures, and undersea surveillance systems. NASA shows a sizable decrease in the current period, which was largely realized in 1971 as the Apollo development program phased out. Final phaseout for Apollo and reduced development of the NERVA engine in 1972 are expected to be nearly offset by increases

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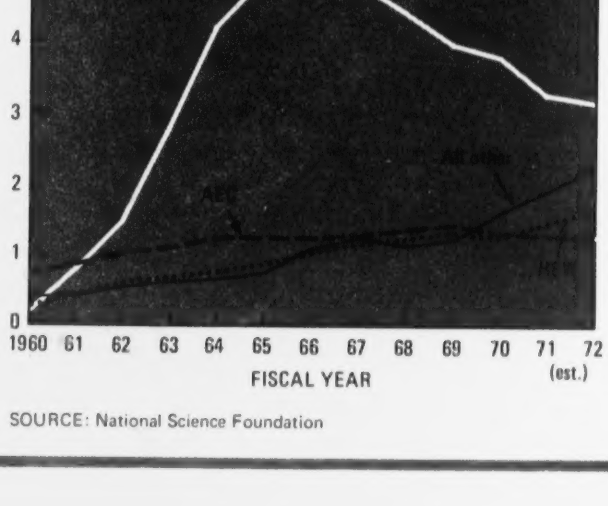
As DOD, NASA, and AEC have undergone a decline in their joint share of the Federal R&D total, other agencies have increased their shares accordingly. HEW, which has experienced an almost continual rise in funds in the 1960–72 timespan, reflects an expansion in its share from 4 percent to 10 percent. This growth is indicative of the rising public interest in better health and education services. In the current period some of

Trends in Federal R&D obligations for agencies leading in R&D programs



SOURCE: National Science Foundation

HEW's chief areas of R&D expansion are cancer, heart and lung diseases, child development, and eye research, and R&D programs for educating the handicapped and those who need vocational training.

Only in recent years has the aggregate R&D growth of the remaining agencies—other than DOD, NASA, HEW, and AEC—been sizable in dollar terms. It is significant that since 1968 their combined obligation total has shown important annual increases even when the Federal R&D total was declining. These agencies have also exerted an increasing upward pressure on the research curve.

The "other agency" group increased its share from 5 percent of the Federal R&D total in 1960 to an estimated 14 percent in 1972, and 3 percentage points are expected to be gained in the current period alone. From 1970 onward the combined obligations for the 29 "other" agencies are clearly higher than the totals for either HEW or AEC (as had not been the case previously), and the upward trend for these agencies appears to be established. It reflects Federal response to national needs in such areas as transportation, support of fundamental science, food production and use, environmental control, urban management, and crime abatement, to name some of the more notable ones.

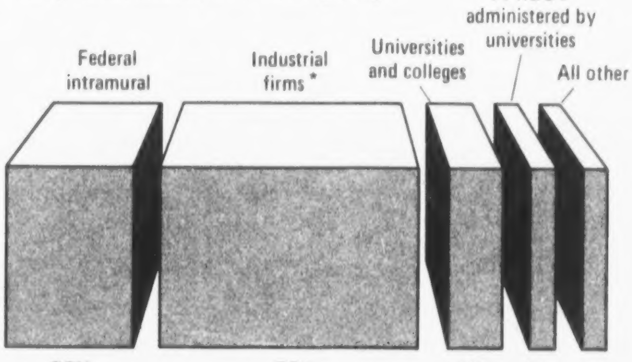
The agencies that are chiefly responsible for the significant rise in the share of this group are the Department of Transportation (DOT), National Science Foundation (NSF), the Departments of Agriculture (USDA), the Interior, and Commerce, the new Environmental Protection Agency (EPA), the Postal Service, the Department of Housing and Urban Development (HUD), and the Department of Justice. These agencies have all scheduled important increases in 1972 R&D programs compared with 1970.[1]

PERFORMERS

The Federal intramural sector continues to grow moderately in the performance of Federal R&D work. In the current period this sector's share of all performance is approximately 25 percent, a higher level than at any time since the end of the 1950's. Not only has the share-of-total increased but absolute dollars for R&D work conducted by Federal personnel have also grown in every year of the series, even in the years after 1967 when the overall Federal effort was declining. It should be noted that intramural performance includes, in addition to direct R&D work, costs for Federal personnel engaged in planning and administering intramural and extramural programs.

Extramurally, the principal performing sector continues to be industry. In 1971, however, the share of R&D work performed by industrial firms (including industrially administered FFRDC's) fell to an estimated 53 percent of the Federal R&D total, the lowest since 1956. This downward shift is a direct reflection of the cutbacks in NASA and AEC development programs, largely carried out by industrial performers. The estimated industry share for 1972 will rise to 54 percent

Federal R&D obligations to performers, FY 1971 (est.)



* Includes Federally Funded Research and Development Centers (FFRDC's) administered by industrial firms.

SOURCE: National Science Foundation

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[1] Data do not reflect congressional action on the SST (within DOT) for the last 3 months of fiscal year 1971 or any action for 1972.

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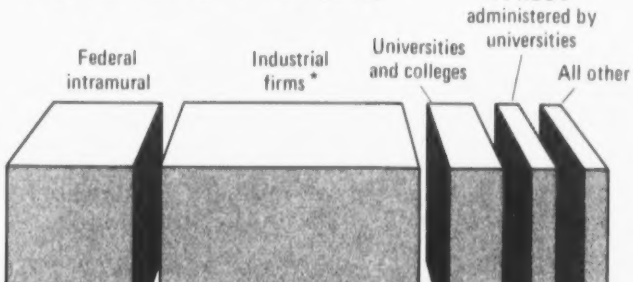
Federal R&D obligations to performers, FY 1971 (est.)



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SOURCE: National Science Foundation

The university and college share of the Federal performance total has risen from 6 percent in 1960 to an estimated 11 percent for 1971 and 1972. This rise in the ratio is consistent with the rise of research programs, both basic and applied, within the budgets of an increasing number of Federal agencies. FFRDC's administered by universities were expected to perform 5 percent of all Federal research and development in 1971, about the same share they have accounted for since 1961.

Other nonprofit institutions (including FFRDC's) have represented about 4 percent of the total since 1965 and continue at that level in the current budget period.

FIELDS OF SCIENCE

A summary of broad changes since 1960 in the relative emphasis on major fields of science within the federally supported research total is shown below:

Field of Science	Research obligations	
	1960	1971 (est.)
Total (millions of dollars)	$1,941	$5,995
	Percent Distribution	
Life sciences	26	29
Psychology	2	2
Physical sciences[a]	31	17
Environmental sciences[a]		11
Mathematics	1	2
Engineering	36	34
Social sciences	2	5
Other sciences	2	1

[a] Physical sciences and environmental sciences were not separately identified prior to 1967.

Among the more important shifts since 1960 are the rise in the share of the life sciences (supported mainly by HEW, USDA, and NASA) and the decline in the combined share of the physical and environmental sciences. The latter fields together received 28 percent of all research support in 1971, compared with 31 percent in

1960. The comparable share was as high as 36 percent in 1964. At present the physical sciences are supported chiefly by NASA, AEC, and DOD, and the environmental sciences are supported mostly by NASA and DOD.

Another significant change since 1960 has been the substantial increase in the share of the social sciences, from 2 percent of the research total to a current 5 percent. The social sciences are chiefly supported by HEW, Office of Economic Opportunity (OEO), USDA, and NSF. In contrast, the share of the engineering sciences, funded primarily by DOD and NASA, has fallen somewhat.

The relative positions of the fields tend to shift somewhat from year to year, and shifts do not always continue steadily in the same direction. However, dollar support to all the major fields has increased considerably over the 1960–72 timespan.

Geographic Distribution

This report includes a survey of the geographic distribution of actual Federal R&D obligations for 1970, the fifth such study to be made.[2] It now becomes increasingly possible to observe certain constants in the Federal R&D funding pattern by States.

For example, in all years of these surveys—1963, 1965, 1968, 1969, and 1970—the 10 States leading in Federal R&D support received 71 percent of the total obligations. In all the years studied, 11 States composed a group from which the "leading 10" were derived. The order of the leading 10 tended to change from one year to another, but between 1969 and 1970 there was no change at all. California, New York, and Maryland were always the three leading States, and in that order. However, California's share, at 35 percent of the Federal total in 1963, had declined to 26 percent by 1970.

In 1970 more than $100 million each in Federal R&D obligations was received by 23 States, while 26 States each received as much as 1 percent of the total on a rounded basis, almost the same situation as in 1963, 1965, 1968, and 1969. The one-half of all States that are the Federal R&D leaders tend to be the same States year

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In 1970 more than $100 million each in Federal R&D obligations was received by 23 States, while 26 States each received as much as 1 percent of the total on a rounded basis, almost the same situation as in 1963, 1965, 1968, and 1969. The one-half of all States that are the Federal R&D leaders tend to be the same States year after year. Once the various resources of a State are used for R&D performance, they are likely to become better organized for future R&D performance and in this way a capability is built that tends to grow. Often the performance of Federal R&D work by a performer in a given location encourages the rise of different types of performers nearby. Thus, R&D firms have grown up near Federal laboratories and test facilities, and university-run FFRDC's have been located near administering universities.

Most States that are heavily engaged in Federal R&D work are highly industrialized and contain aircraft and electronics manufacturing firms, electrical equipment and communications firms, machinery and chemical producers. Also, most of the States leading in Federal R&D support to industrial firms show strength in other performer categories; they are among the leaders in Federal R&D support to universities, to other nonprofit institutions, and to Federal intramural centers.

However, when funding is analyzed on a performer basis among the less supported States (below the leading 10 or 15), universities and colleges are likely to represent the most actively used sector because Federal R&D support to this kind of performer is more widely dispersed than to others.

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SECTION 2.

basic research

Basic research is systematic, intensive study directed toward fuller scientific knowledge or understanding of the subject studied, in which the investigator is motivated primarily by the desire to pursue knowledge for its own sake. It is generally free from the need to meet immediate objectives and tends to explore a broad field, seeking to increase the understanding of natural laws. The span of basic research covers investigations in which the new knowledge itself is the major goal as well as studies in which the new understanding is regarded as part of the groundwork for subsequent applications to further economic growth, national defense, or the solution of social and other problems. Universities and colleges account for more than one-half of all the basic research performed in the United States, and the close relationship of such work to the education and training of scientists and engineers is a key aspect of academic science.

THE CURRENT PERIOD

The status of the Federal basic research effort from 196

Federal obligations for basic re

[Dollars in millio

Agency	1969
Total	$2,094
National Aeronautics and Space Administration	678
Department of Health, Education, and Welfare	371
National Science Foundation	248
Atomic Energy Commission	285
Department of Defense	276
Other agencies	236

- In 1970, for the first time in 15 years, total Federal support for basic research declined, mostly reflecting the drop in funding for NASA and, secondarily, a decrease for DOD.

- In 1971, while NASA continued to drop, HEW and NSF made impressive gains in their basic research programs, and the overall upward trend was resumed.

THE CURRENT PERIOD

The status of the Federal basic research effort from 1969 to 1972 is as follows:

Federal obligations for basic research, by agency

[Dollars in millions]

Agency	Actual			Estimates			
	1969	1970	Percent change 1969–70	1971	Percent change 1970–71	1972	Percent change 1971–72
Total	$2,094	$2,062	−1.5	$2,165	+5.0	$2,399	+10.8
National Aeronautics and Space Administration	678	637	−6.0	626	−1.7	688	+9.9
Department of Health, Education, and Welfare	371	388	+4.6	452	+16.5	488	+8.0
National Science Foundation	248	245	−1.2	285	+16.3	400	+40.4
Atomic Energy Commission	285	287	+0.7	278	−3.1	266	−4.3
Department of Defense	276	247	−10.5	243	−1.6	245	+0.8
Other agencies	236	258	+9.3	281	+8.9	312	+11.0

- In 1970, for the first time in 15 years, total Federal support for basic research declined, mostly reflecting the drop in funding for NASA and, secondarily, a decrease for DOD.

- In 1971, while NASA continued to drop, HEW and NSF made impressive gains in their basic research programs, and the overall upward trend was resumed.

- The 1972 total showed a significant gain, primarily engendered by NSF, NASA, and HEW, although all agencies except AEC reported increases in basic research.

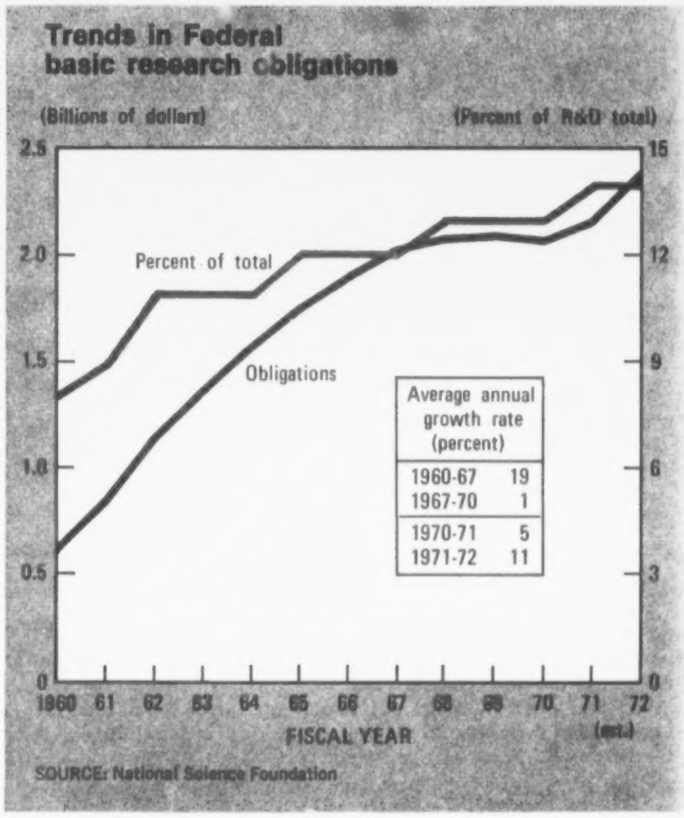
- Eleven agencies other than the leading five sponsored basic research programs in the current period. They accounted for 13 percent of the total in 1971.

TRENDS

- Basic research has shown a more consistent growth trend than the Federal R&D total. From 1960 to 1967 its 19-percent average annual rise was much more rapid than the 12-percent rise for research and development as a whole; from 1967 to 1970, while the R&D total was falling, basic research held to almost the same yearly level.
- In the current period basic research has resumed an upward pace. In both 1971 and 1972 it was expected to grow faster than overall research and development.
- The share of basic research in the Federal R&D total will have risen from 8 percent in 1960 to an estimated 14 percent in 1972. In recent years this rise was due more to a decrease in development funding than a rise in basic research funding until 1971 and 1972 when the rise in basic research dollars was more influential in increasing the basic research share.

AGENCIES

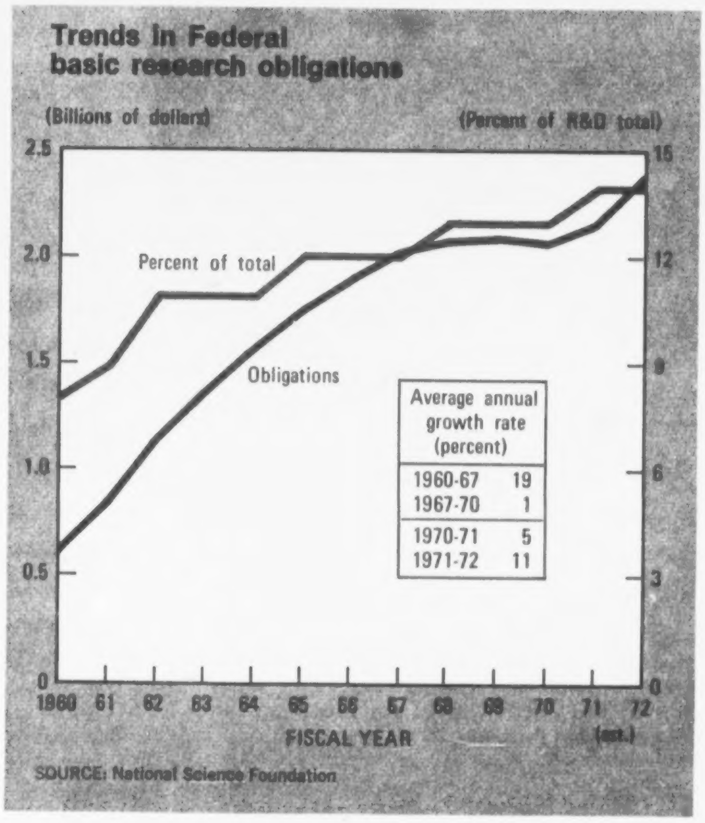
- Five agencies—NASA, HEW, NSF, AEC, and DOD—accounted for 89 percent of the total in 1960, and again in 1967, but 87 percent in 1971. However, the relative shares of their individual programs varied from one year to another.
- NASA has led since 1961 in basic research support, and usually by a wide margin, although its share of the Federal total has dropped somewhat in recent years. The high point was 33 percent in 1964, but the share was an estimated 29 percent in 1971.
- The chief reason for NASA's high level of basic research support lies in the nature of its experiments, which call for large outlays for expendable equipment, such as launch vehicles and spacecraft.



Trends in Federal basic research obligations

SOURCE: National Science Foundation

- 1970 was the first year since 1960 that NASA's basic research obligations dropped; they were expected to fall somewhat further in 1971 but to rise again in 1972 to the highest level on record.
- DOD was the leading basic research support agency in 1960, but from 1963 through 1970 it was in an intermediate position, and in 1971 and 1972 DOD was expected to account for the smallest basic research effort of the five leading agencies.
- Since 1963 HEW has been the second largest supporter of basic research. Its programs cover fundamental research investigations in the important branches of biomedicine and health. From 1960 to 1967 its average annual growth rate was second only to that of NASA and equal to that of NSF. From 1967 to 1971 HEW shared with NSF the highest rate of growth among the leading agencies.



Average annual growth rate (percent)	
1960-67	19
1967-70	1
1970-71	5
1971-72	11

SOURCE: National Science Foundation

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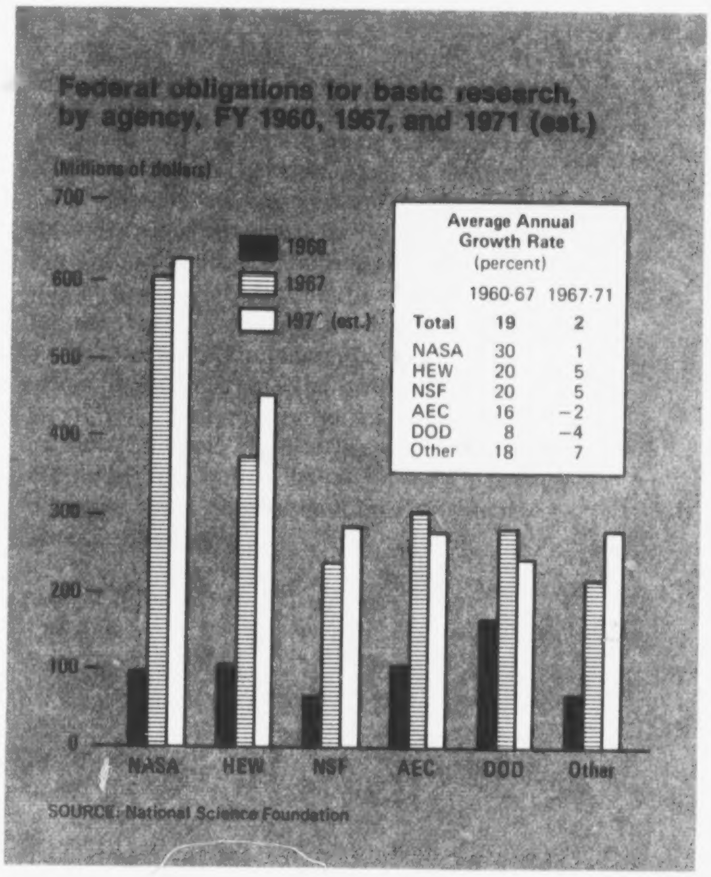
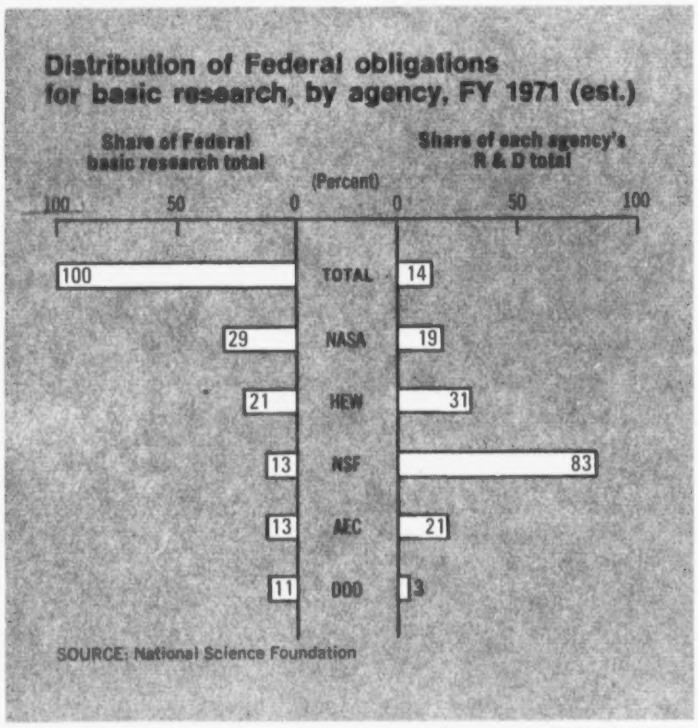
- NSF, which matched the growth rate of HEW from 1960 to 1971, fosters the extension of knowledge in every scientific field, mostly through grants to universities and colleges. In the current period NSF has taken on certain of the basic research programs relinquished for policy reasons by DOD and other agencies.
- AEC has continued to carry on basic research activities in support of its total mission of exploring atomic energy and developing uses for it. But in 1971 and 1972, its programs decreased slightly, and in 1972 AEC is expected to be the sole agency with reduced basic research support.
- Certain of the other agencies reflect important increases between 1970 and 1972; they are Commerce, USDA, and the Smithsonian.



	Average Annual Growth Rate (percent)	
	1960-67	1967-71
Total	19	2
NASA	30	1
HEW	20	5
NSF	20	5
AEC	16	−2
DOD	8	−4
Other	18	7

SOURCE: National Science Foundation

- The share of basic research in agency R&D budgets varies widely. DOD, for example, devoted 3 percent of its R&D budget to basic research in 1971; NSF, 83 percent; and NASA, 19 percent. The Smithsonian was the only agency to direct 100 percent of its effort to basic research. Special factors related to program objectives and missions determine the role each agency assigns to basic research.


Distribution of Federal obligations for basic research, by agency, FY 1971 (est.)

SOURCE: National Science Foundation

PERFORMERS

- Federal basic research work is directed to every type of perfor
and Federal intramural organizations account for the bulk of t

Federal obligations for basic research, by

[Dollars in millions]

Performer	Actual	
	1969	1970
Total	$2,094	$2,06
Federal intramural	577	65
Industrial firms[a]	399	32
Universities and colleges	766	71
FFRDC's administered by universities	255	26
Other nonprofit institutions[a]	73	6
Other	25	3

[a] Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

- All sectors received increased funding in 1971, and most of them showed even greater increases in funding for 1972.

- The 1972 anticipated increase in basic research obligations to universities and colleges is the largest dollar increase for any performing sector. It primarily reflects a rise in NSF support.

- Since 1961 HEW has been the leading support agency for Federal basic research at universities and colleges, through grants in biomedicine, mental health, and related areas. In 1972, however, NSF is scheduled to become the chief agency in basic research support to this sector.

- The NSF funding increase to universities and colleges includes high-priority research projects dropped by other agencies as well as other basic research programs. These include basic research work within the RANN (Research Applied to National Needs) program and research with a high potential for providing a fundamental understanding of relevant scientific problems.

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PERFORMERS

- Federal basic research work is directed to every type of performer, although universities and colleges and Federal intramural organizations account for the bulk of the effort.

Federal obligations for basic research, by performer

[Dollars in millions]

Performer	Actual			Estimates			
	1969	1970	Percent change 1969–70	1971	Percent change 1970–71	1972	Percent change 1971–72
Total	$2,094	$2,062	−1.5	$2,165	+5.0	$2,399	+10.8
Federal intramural	577	658	+14.0	669	+1.7	705	+5.4
Industrial firms [a]	399	320	−19.8	351	+9.7	434	+23.6
Universities and colleges	766	718	−6.3	744	+3.6	843	+13.3
FFRDC's administered by universities	255	267	+4.7	283	+6.0	286	+1.1
Other nonprofit institutions [a]	73	63	−13.7	69	+9.5	76	+10.1
Other	25	35	+40.0	49	+40.0	55	+12.2

[a] Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

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- Intramural performance, second in size of basic research effort, rose in 1970, 1971, and 1972. NASA continues to be the largest intramural supporter, but was scheduled for reduction in the current period with its share of the intramural total dropping from 36 percent in 1970 to 27 percent in 1972.

- DOD's basic research programs were formerly assigned for the most part to universities, but currently they are almost equally divided between the intramural and university sectors. The reduction in university support largely reflects DOD's recent limitation on basic research to that which has a direct and apparent relationship to a mission or function of the Department.

- For the third largest sector, industrial firms, NASA is by far the leading basic research support agency. This agency scheduled a moderate increase for 1971 and an important increase for 1972, primarily related to work on the Skylab and VIKING projects and to initiation of the Outer Planets/Grand Tour project. Almost the entire industry gain for 1972 will be derived from NASA programs.

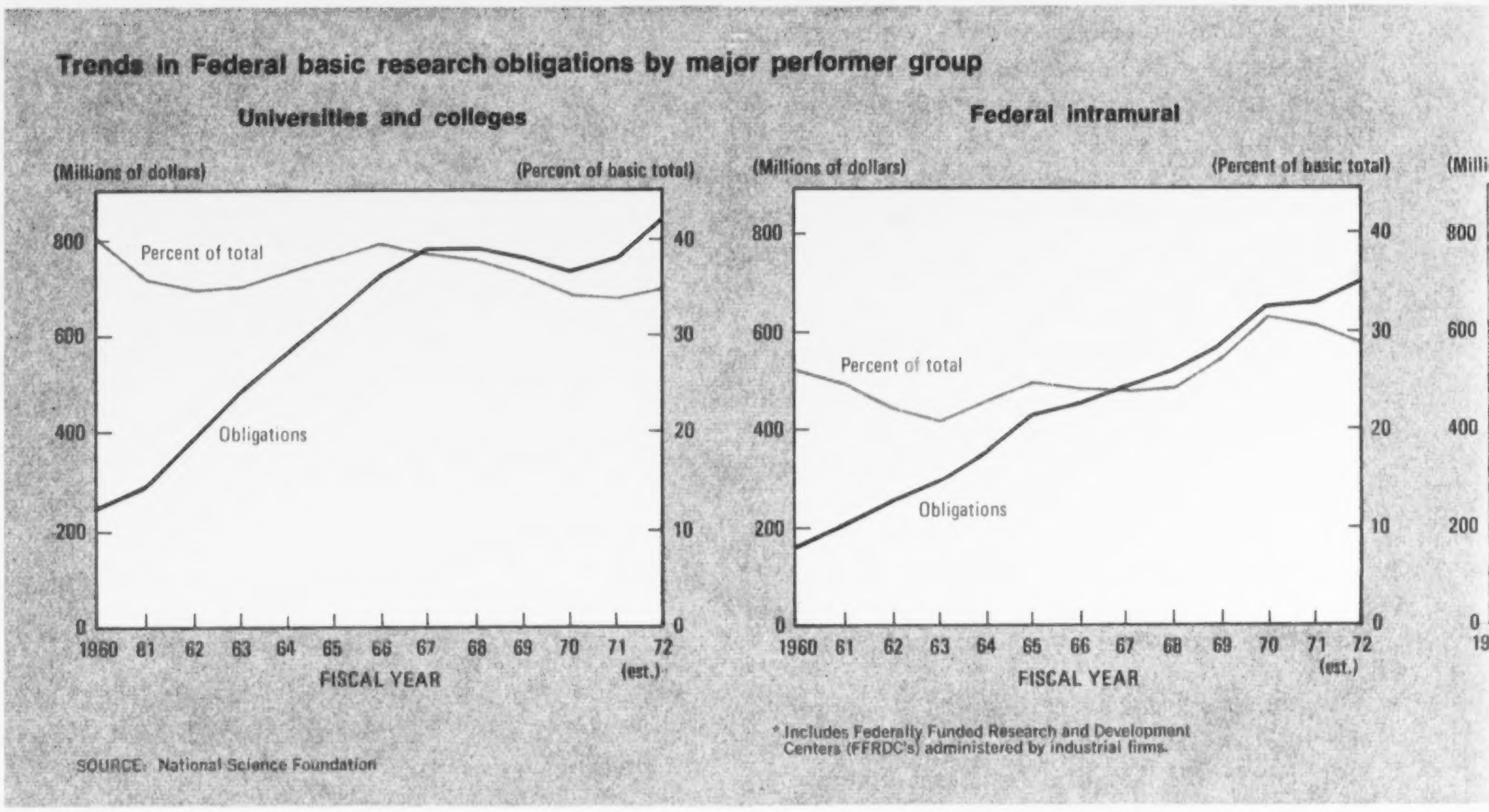
Federal obligations for basic research, by performer and agency, FY 1971 (est.)

[Dollars in millions]

	TOTAL	NASA	HEW	NSF	AEC	DOD	OTHER
TOTAL	**$2,166**	**$626**	**$452**	**$286**	**$278**	**$243**	**$281**
Federal intramural	669	198	134	18	1	101	217
Industrial firms	321	290	4	2	1	22	2
FFRDC's administered by industrial firms	30	a	–	1	29	–	–
Universities and colleges	744	51	248	217	74	111	43
FFRDC's administered by universities	283	79	2	31	170	1	–
Other nonprofit institutions	66	7	39	10	2	5	3
FFRDC's administered by other nonprofit institutions	3	a	a	a	1	1	1
Other	49	a	24	6	a	1	18

[a] Less than $500,000.

- NASA is the only agency where the chief performing sector is industry. NASA also uses its own facilities and personnel extensively and is the leading agency supporter of intramural work.
- For HEW, NSF, and DOD, universities and colleges do more basic research than any other sector.
- In the case of AEC, university-administered FFRDC's receive more support than universities and colleges proper, which are next in use, and industry-administered FFRDC's receive the third largest amount of support.
- For agencies with smaller basic research programs, the Federal intramural sector usually accounts for the bulk of the work.



Trends in Federal basic research obligations by major performer group

Universities and colleges

Federal intramural

* Includes Federally Funded Research and Development Centers (FFRDC's) administered by industrial firms.

SOURCE: National Science Foundation

- The share of the basic research total performed by the university and college sector has dropped from 40 percent in 1960 to 34 percent in 1971. However, this sector remains the leading one since the university atmosphere is more conducive than any other to the conduct of basic research.

- The Federal intramural share of the total has tended to increase since 1960, from 26 percent that year to 31 percent in 1971, due primarily to increased work on the part of NASA, next, to the growth of in-house work on the part of HEW and, lastly, to increased effort by agencies other than DOD, NASA, AEC, and HEW.

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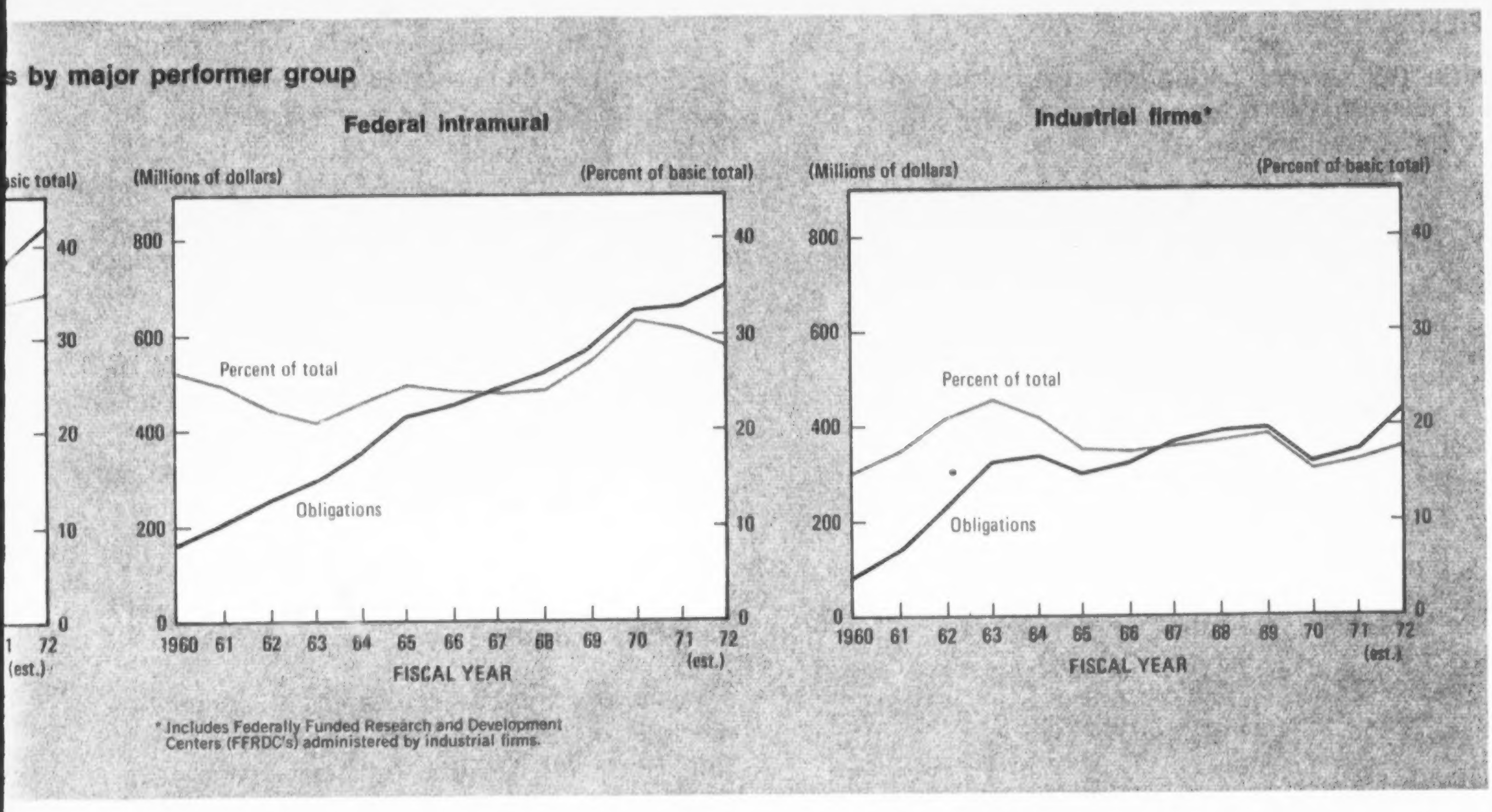

s by major performer group

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- Industrial performance of basic research rose from 15 percent of the total in 1960 to a high of 23 percent in 1963, but in 1971 it was expected to be 16 percent. The whole trend of industrially performed basic research has been strongly influenced by NASA, which accounts for 80 to 90 percent of the total for this sector. The somewhat higher estimated industry share for 1972 is almost entirely due to the NASA increase.

FIELDS

- In the current period the distribution of the Federal basic research effort by fields of science is as follows:

Federal obligations for basic research, by field of science

[Dollars in millions]

Field of science	Actual		Estimates			
	1970		1971		1972	
	Obligations	Percent share	Obligations	Percent share	Obligations	Percent share
Total	$2,062	100	$2,165	100	$2,399	100
Life sciences	577	28	631	29	735	31
Psychology	57	3	60	3	66	3
Physical sciences	704	34	726	34	730	30
Astronomy	204	10	214	10	189	8
Chemistry	143	7	145	7	187	8
Physics	353	17	358	17	352	15
Other	5	(a)	8	(a)	2	(a)
Environmental sciences	352	17	362	17	419	17
Atmospheric sciences	173	8	173	8	198	8
Geological sciences	124	6	122	6	141	6
Oceanography	55	3	62	3	75	3
Other	------	------	5	(a)	5	(a)
Mathematics	59	3	53	2	58	2
Engineering	243	12	240	11	248	10
Social sciences	66	3	81	4	100	4
Other sciences	4	(a)	12	1	43	2

[a] Less than 0.5 percent.

- The physical sciences in 1971 were expected to account for 34 percent of total basic research funds, chiefly from NASA and AEC, and the environmental sciences for 17 percent, mainly from NASA. Their combined total of 51 percent compares with 52 percent for the same fields in 1960. (They were not separately identified prior to 1967.)

- Obligations to the life sciences amounted to 29 percent of the total in 1971; more than one-half of these obligations were scheduled by HEW. Obligations to the life sciences in 1960 were 28 percent of the basic research total.

- The engineering sciences made up 11 percent, compared with 13 percent in 1960, and were primarily supported by NASA and DOD.

- The social sciences represented 4 percent of the total in 1971, up from 1 percent in 1960, with HEW and NSF the principal agency supporters.

- The psychological sciences accounted for 3 percent of the total in 1971 and the mathematical sciences 2 percent, about the same respective shares as they represented in 1960.

(For detailed data on this section see appendix tables C-29 through C-47, C-76, C-77, C-79, C-89, C-100, C-105, and C-109.)

SECTION 3.

applied research

Applied research is systematic, intensive study to reach fuller knowledge or understanding concerning the means by which a recognized need may be met. Applied research draws upon the existing knowledge created by basic research and in its turn creates additional knowledge. It differs from basic research in that it concentrates in limited areas and is pointed toward specific practical ends rather than toward investigation for its own sake. In the course of applied research activities the first steps are taken to reduce an abstract idea to a useful purpose, frequently as a forerunner to development.

THE CURRENT PERIOD

Changes in applied research obligations in the current peri

Federal obligations for applied rese

[Dollars in millions]

Agency	A
	1969
Total	$3,145
Department of Defense	1,135
Department of Health, Education, and Welfare	803
National Aeronautics and Space Administration	618
Department of Agriculture	145
Atomic Energy Commission	132
Department of Transportation	51
Department of the Interior	109
Department of Commerce	29
Environmental Protection Agency	--------
Veterans Administration	43
National Science Foundation	11
Office of Economic Opportunity	11
Department of State	16
Other agencies	42

- The 1969–72 period indicates a steady rise in total applied research obligations after an almost 5-percent decline from 1968 to 1969. Nearly all agencies were expected to contribute to this growth.

- In 1970 the important growth in applied research derives more from growth for DOD than any other agency, although the only agencies to experience significant reductions were HEW and Interior.

- The decrease for Interior was entirely due to the transfer of the Bureau of Commercial Fisheries to the National Oceanic and Atmospheric Administration (NOAA) within Commerce and the Federal Water Quality Administration to EPA.

- In 1971 and 1972 HEW reversed its 1970 drop with important increases that were expected to

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THE CURRENT PERIOD

Changes in applied research obligations in the current period are shown below:

Federal obligations for applied research, by agency

[Dollars in millions]

Agency	Actual			Estimates			
	1969	1970	Percent change 1969–70	1971	Percent change 1970–71	1972	Percent change 1971–72
Total	$3,145	$3,540	+12.6	$3,830	+8.2	$4,244	+10.8
Department of Defense	1,135	1,310	+15.4	1,236	−5.6	1,388	+12.3
Department of Health, Education, and Welfare	803	741	−7.7	910	+22.8	1,002	+10.1
National Aeronautics and Space Administration	618	773	+25.1	852	+10.2	874	+2.6
Department of Agriculture	145	156	+7.6	170	+8.7	176	+3.6
Atomic Energy Commission	132	146	+10.6	145	−0.8	145	−0.2
Department of Transportation	51	67	+31.4	90	+34.4	161	+78.3
Department of the Interior	109	72	−33.9	84	+16.9	91	+8.8
Department of Commerce	29	55	+89.7	78	+42.8	86	+9.7
Environmental Protection Agency	--------	48	--------	56	+16.8	70	+26.6
Veterans Administration	43	53	+23.3	55	+5.3	55	--------
National Science Foundation	11	30	+172.7	42	+41.4	70	+67.0
Office of Economic Opportunity	11	28	+154.5	37	+32.2	37	+1.0
Department of State	16	19	+18.8	25	+34.2	28	+11.2
Other agencies	42	42	--------	50	+19.0	61	+22.0

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- In 1970 the important growth in applied research derives more from growth for DOD than any other agency, although the only agencies to experience significant reductions were HEW and Interior.

- The decrease for Interior was entirely due to the transfer of the Bureau of Commercial Fisheries to the National Oceanic and Atmospheric Administration (NOAA) within Commerce and the Federal Water Quality Administration to EPA.

- In 1971 and 1972 HEW reversed its 1970 drop with important increases that were expected to bring about the highest applied research totals on record for this agency.

- DOD experienced an overall loss in 1971, brought about by reductions in all three services and the Defense Agencies, but between 1969 and 1972 the Department showed an overall gain of 22 percent. Three-quarters of this gain represented Air Force programs.

- Within HEW the National Institutes of Health in the current period is undergoing expansion in applied research, mainly spurred by cancer investigations, heart and lung studies, child health and eye research. The Office of Education's larger applied research efforts are directed to vocational education and education for the handicapped.

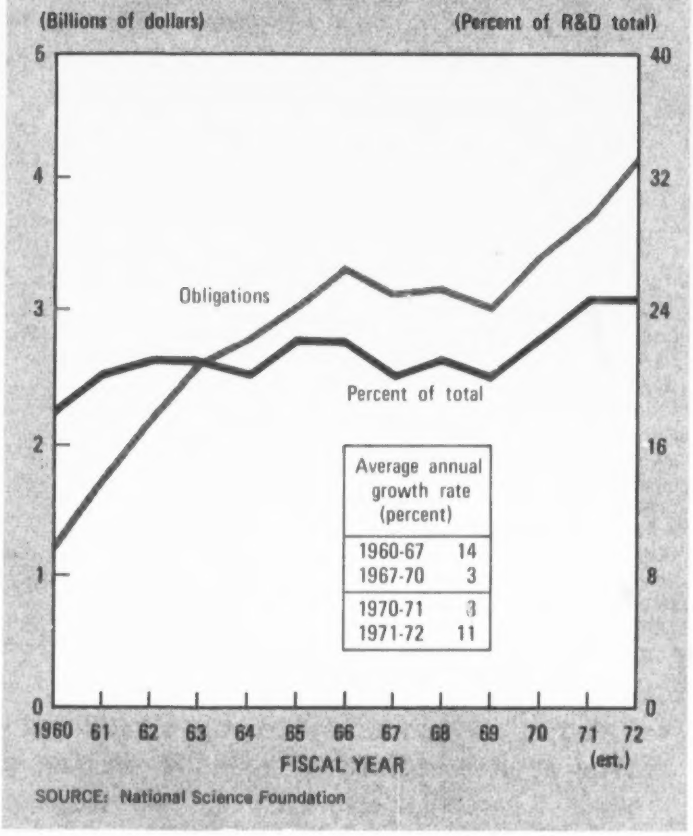
- NASA in 1970 and 1971 registered important increases in applied research obligations. These include further funding for work on earth resources surveys and the space station.

- The substantial increases in the applied research efforts of DOT in 1971 and 1972 arise mostly from the transfer of development funds to applied work on the new air traffic control system and from work on aircraft safety and air quality within the Federal Aviation Administration, and from extended planning, forecasting, and systems analysis in the Transportation Systems Center within the Office of the Secretary.
- Commerce, EPA, and NSF are three other agencies whose applied research programs in the 1970–72 period contribute fairly substantially to overall growth. For Commerce most of the applied research increases are for NOAA programs; for the newly organized EPA they are largely for work on water pollution and air pollution; and for NSF they are mainly for the new Research Applied to National Needs (RANN) program and the International Decade of Ocean Exploration (IDOE) program, initiated in 1971 with NSF as the lead agency.

TRENDS

- Applied research shows a steep growth trend from 1960 to 1966, reflecting the strong buildup of DOD and NASA programs. By the end of that period Federal applied research had established a level above $3 billion annually.
- Between 1966 and 1969 the applied research activities of the two leading agencies (DOD and NASA) declined considerably, but this loss was to a great extent offset by growth in applied research on the part of HEW, AEC, and most of the other agencies. Nonetheless, the overall total declined somewhat.
- From 1961 through 1969 applied research maintained a steady 20- to 22-percent range in its share of the Federal R&D total.

Trends in Federal applied research obligations



SOURCE: National Science Foundation

- In 1970 applied research rose, in contrast to the drop in the overall R&D curve. Chief contributors to this rise were DOD and NASA.
- For the current (1970–72) period applied research shows a powerful upward trend spurred by programs of most of the leading agencies. In 1972, for the first time, the applied research total is expected to cross the $4 billion level.
- The 1971 and 1972 estimates indicate that, for the first time, applied research will represent as much as 25 percent of all Federal R&D obligations.

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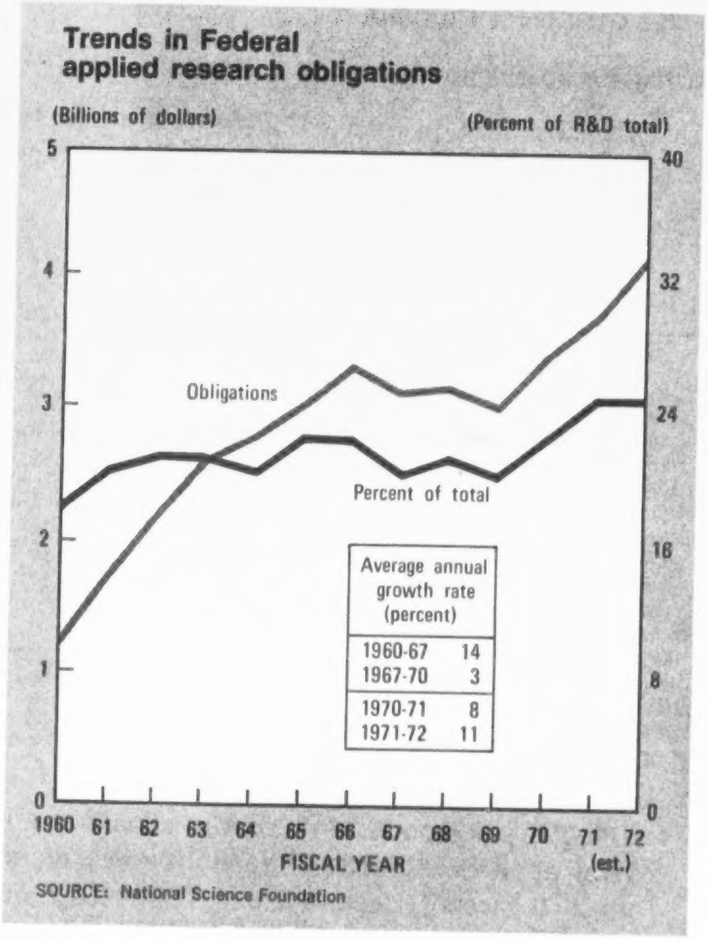
Trends in Federal applied research obligations

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AGENCIES

- Of the 33 agencies reporting in the current period, 32 conducted applied research programs. The one exception was the Smithsonian Institution.

- Three agencies—DOD, HEW, and NASA—continue to dominate the Federal applied research effort. In 1971 they accounted for 78 percent of the Federal agency total. Most of the overall dollar rise from 1960 to 1967 was caused by their rapidly growing programs. From 1967 to 1971, however, their applied research programs grew far more slowly, or declined, while higher growth rates were registered by most other agencies, especially DOT.

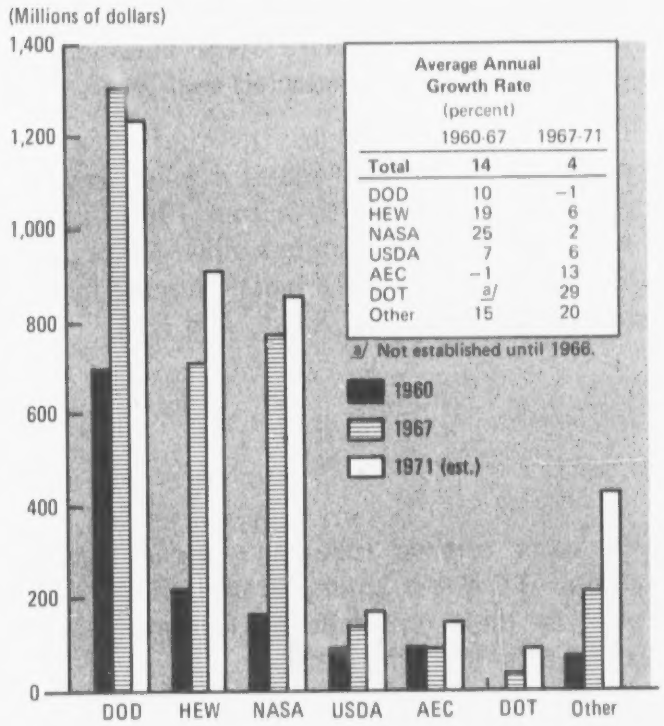
- Throughout the 1960–71 period DOD was the chief agency to support applied research. Hence its 10-percent average annual growth rate in the 1960–67 period strongly influenced the rise in the Federal total, and its 1-percent decline rate in the 1967–70 period had a somewhat depressing effect on the overall trend.

- HEW reflects almost sustained applied research growth in the 1960–71 timespan, although its rate of expansion from 1960 to 1967 was much more rapid than from 1967 to 1971. A drop in applied research in 1970 was more than made up in 1971.

- In the 1960–67 period NASA reflected an exceptionally high average annual growth rate and, despite the decline that set in between 1966 and 1969, showed a small average annual increase between 1967 and 1971. In 1971 and 1972 NASA's applied research efforts were scheduled to expand considerably and attain the highest levels thus far.

- In both periods USDA's growth rate was very evenly sustained. This agency has showed some gain in applied research obligations every year from 1960 to 1971.

Federal obligations for applied research, by agency, FY 1960, 1967, and 1971 (est.)



Average Annual Growth Rate (percent)

	1960-67	1967-71
Total	14	4
DOD	10	−1
HEW	19	6
NASA	25	2
USDA	7	6
AEC	−1	13
DOT	a/	29
Other	15	20

a/ Not established until 1966.

SOURCE: National Science Foundation

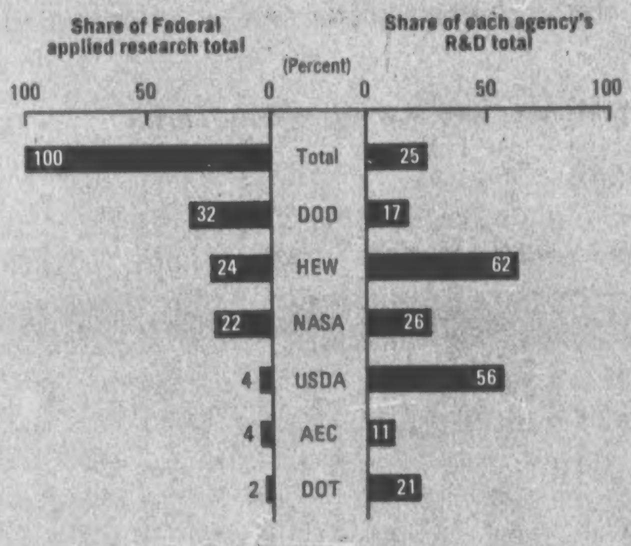
- AEC, on the other hand, experienced a slight net loss between 1960 and 1967, followed by a notable expansion in its applied research programs from 1967 to 1971.

- In the 1967–71 period, aside from DOT, for which large gains were chiefly recorded by the Federal Highway Administration, growth was also strongly evidenced by Commerce, NSF, and the Office of Economic Opportunity (OEO).

- Although applied research is part of the R&D support activities of almost every agency, the share in these activities varies widely among agencies.

- At the lower extreme AEC planned to direct only 11 percent of all R&D obligations to applied research in 1971 whereas six independent agencies and seven agency subdivisions at the other extreme planned to devote 100 percent to applied research.

Distribution of Federal obligations for applied research, by agency, FY 1971 (est.)



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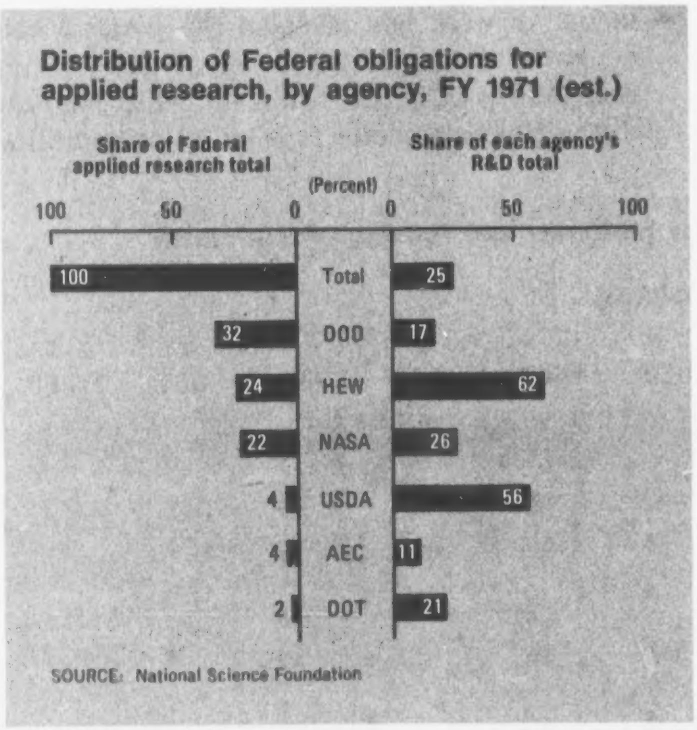

Distribution of Federal obligations for applied research, by agency, FY 1971 (est.)

SOURCE: National Science Foundation

PERFORMERS

All sectors participate in applied research work for the Federal Government, and the dollar obligations directed to each in the current period are given below:

Federal obligations for applied research, by performer

[Dollars in millions]

Performer	Actual			Estimates			
	1969	1970	Percent change 1969–70	1971	Percent change 1970–71	1972	Percent change 1971–72
Total	$3,145	$3,540	+12.6	$3,830	+8.2	$4,244	+10.8
Federal intramural	1,195	1,375	+15.1	1,433	+4.2	1,519	+6.0
Industrial firms [a]	848	1,047	+23.5	1,126	+7.5	1,315	+16.9
Universities and colleges	643	633	−1.6	727	+14.8	826	+13.5
FFRDC's administered by universities	139	150	+7.9	145	−3.2	150	+3.2
Other nonprofit institutions [a]	226	250	+10.6	280	+11.9	305	+8.9
Other	95	85	−10.5	120	+40.6	131	+8.9

[a] Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

- In the 1969–72 period the strong general rise in Federal applied research programs has affected all sectors. Most of them show increases from one year to the next.

- Industrial work has revealed the greatest tendency to fluctuate as a result of program changes by DOD and NASA. In 1970 funds to this performing sector rose by 24 percent after

Federal obligations for applied research, by performer and agency, FY 1971 (est.)

[Dollars in millions]

	TOTAL	DOD	HEW	NASA	USDA	AEC	DOT	OTHER
TOTAL	$3,830	$1,236	$910	$862	$170	$145	$90	$427
Federal intramural	1,433	457	148	454	126	4	32	212
Industrial firms	1,084	628	45	307	a	2	31	71
FFRDC's administered by industrial firms	42	3	–	1	–	38	–	–
Universities and colleges	727	56	474	37	42	17	7	94
FFRDC's administered by universities	146	32	3	38	–	71	–	1
Other nonprofiit institutions	237	32	156	11	1	3	5	29
FFRDC's administered by other nonprofit institutions	43	27	3	a	–	10	a	3
Other	120	2	82	1	2	1	14	18

a/ Less than $500,000.

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[Dollars in millions]

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	1969	1970	Percent change 1969–70	1971	Percent change 1970–71	1972	Percent change 1971–72
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	643	633	−1.6	727	+14.8	826	+13.5
	139	150	+7.9	145	−3.2	150	+3.2
	226	250	+10.6	280	+11.9	305	+8.9
	95	85	−10.5	120	+40.6	131	+8.9

Centers (FFRDC's) administered by this sector.

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show increases

- Industrial work has revealed the greatest tendency to fluctuate as a result of program changes by DOD and NASA. In 1970 funds to this performing sector rose by 24 percent after a decline of several years. A further rise is expected to continue through 1972.
- However, in the current period the chief performing sector for overall Federal applied work still continues to be the Federal one, and moderate increases are expected each year.
- Universities and colleges, the third largest area of performance for Federal applied research, declined slightly in 1970 from 1969, but then resumed the rise recorded since 1963. In the current period they are mostly funded by HEW, next by DOD, USDA, NASA, and NSF.

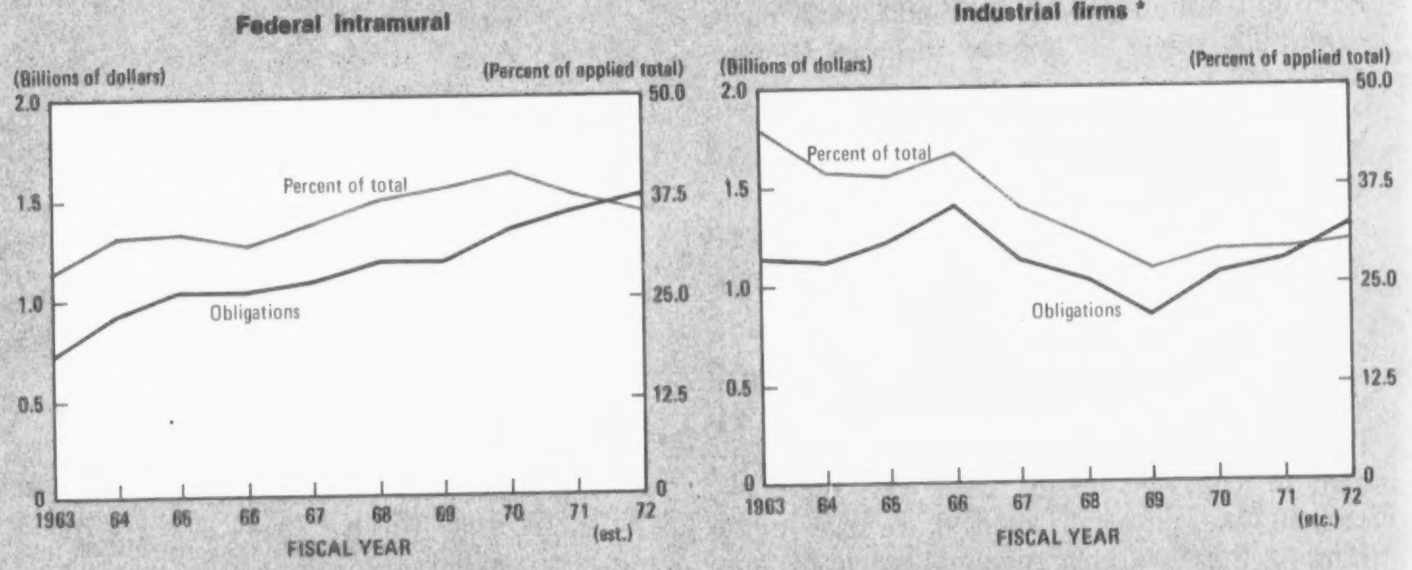
or applied research, by performer and agency, FY 1971 (est.)

[Dollars in millions]

OTAL	DOD	HEW	NASA	USDA	AEC	DOT	OTHER
3,830	$1,236	$910	$852	$170	$145	$90	$427
1,433	457	148	454	126	4	32	212
1,084	628	45	307	a	2	31	71
42	3	–	1	–	38	–	–
727	56	474	37	42	17	7	94
145	32	3	38	–	71	–	1
237	32	156	11	1	3	5	29
43	27	3	a	–	10	a	3
120	2	82	1	2	1	14	18

- All major applied research support agencies except AEC direct an important portion of their work to their own laboratories and facilities (HEW less than the rest).
- For DOD the most prominently used sector is industry, even though this agency also uses its own personnel for a substantial portion of its applied research work.
- HEW directs most of its applied research funds to universities and colleges, the next largest amount (in 1971) to other nonprofit institutions, and the third largest amount to its own facilities.
- NASA, USDA, and DOT are three leading support agencies that use their own personnel and facilities for applied research more than any other performing group. NASA and DOT also use industry importantly, and USDA places a sizable share of its work in universities and colleges.
- AEC uses FFRDC's administered by each sector far more than it uses the sectors proper. AEC is unique in that almost none of its work is carried out directly in its own facilities by its own personnel.

Trends in Federal applied research obligations by major performer group



Federal intramural

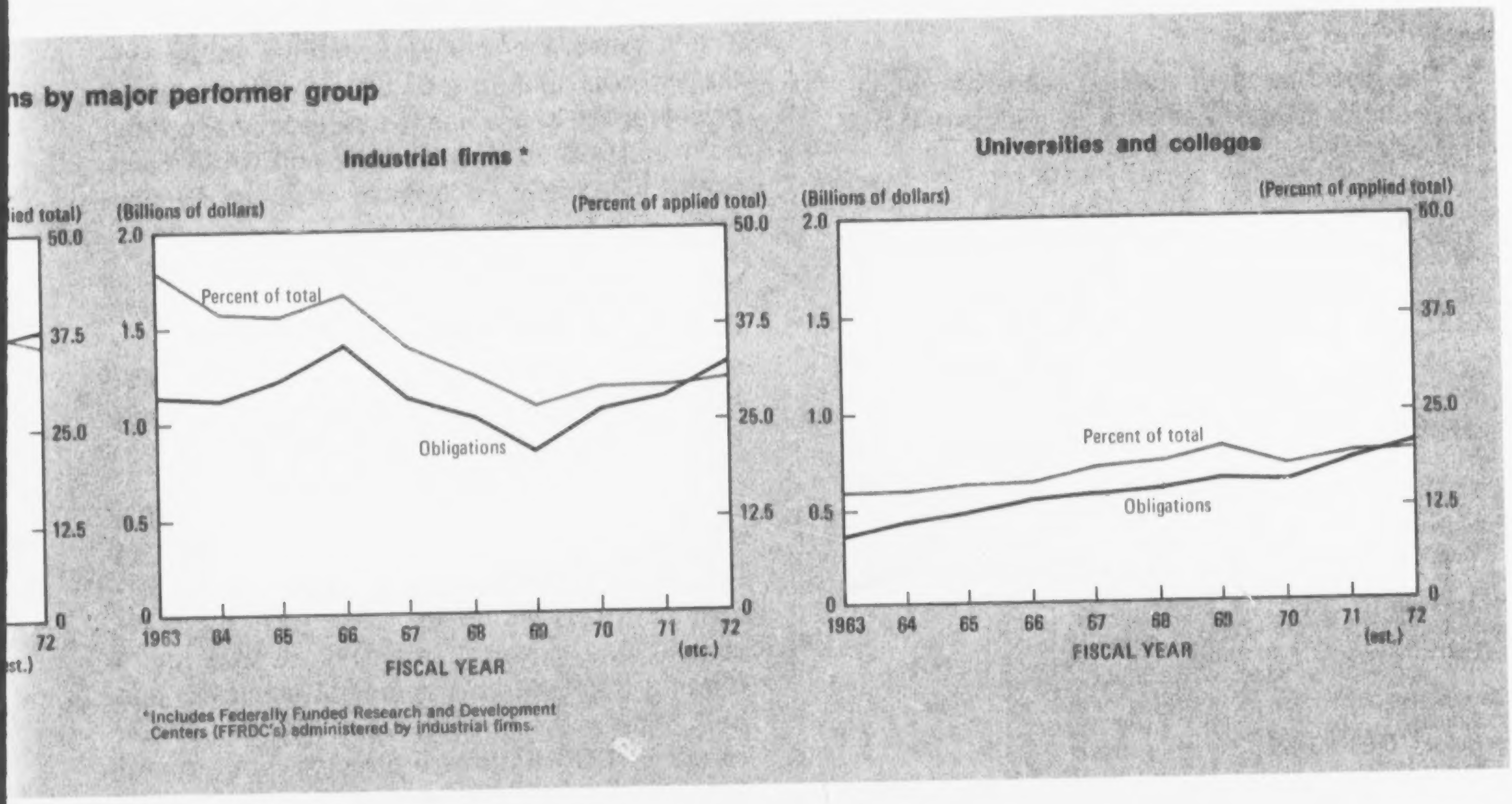
Industrial firms *

*Includes Federally Funded Research and Development Centers (FFRDC's) administered by industrial firms.

SOURCE: National Science Foundation

- By 1967 Federal intramural performance of applied research had risen to a point almost equal to industrial performance (including FFRDC's). Thereafter, the intramural effort continued to increase and so did its share of the applied research total. As the leading sector in 1971, its share was 37 percent of the total.

- From 1966 to 1969 obligations to industrial firms dropped yearly, but then started a rising trend. In 1971 dollar obligations to industry amounted to 29 percent of the total, compared with 27 percent in 1969, and 45 percent in 1963.


ns by major performer group

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- From 1966 to 1969 obligations to industrial firms dropped yearly, but then started a rising trend. In 1971 dollar obligations to industry amounted to 29 percent of the total, compared with 27 percent in 1969, and 45 percent in 1963.

- From 1963 to 1972 funds for applied research activities at universities and colleges rose consistently. The great bulk of this support came from HEW and was large enough to offset decreases in DOD support after 1966. The university and college sector increased its share of the applied research total from 14 percent to 19 percent in this period.

FIELDS

The distribution of applied research obligations to major fields of science in the current period is as follows:

Federal obligations for applied research, by field of science

[Dollars in millions]

Field of science	Actual		Estimates			
	1970		1971		1972	
	Obligations	Percent share	Obligations	Percent share	Obligations	Percent share
Total	$3,540	100	$3,830	100	$4,244	100
Life sciences	957	27	1,104	29	1,210	29
Psychology	56	2	65	2	74	2
Physical sciences	306	9	300	8	356	8
Astronomy	7	(a)	8	(a)	10	(a)
Chemistry	101	3	102	3	117	3
Physics	185	5	178	5	216	5
Other	13	(a)	12	(a)	13	(a)
Environmental sciences	234	7	271	7	283	7
Atmospheric sciences	115	3	138	4	143	3
Geological sciences	65	2	71	2	75	2
Oceanography	37	1	36	1	37	1
Other	18	1	25	1	28	1
Mathematics	43	1	51	1	54	1
Engineering	1,725	49	1,774	46	1,950	46
Social sciences	150	4	192	5	211	5
Other sciences	68	2	74	2	107	3

[a] Less than 0.5 percent.

- Between 1960 and 1972 Federal obligations for applied research will have risen more than three times, and some changes have taken place in the relationships between major fields.
- The engineering sciences continue to be the largest area in terms of dollars and in terms of share; the share was 46 percent of the total both in 1960 and 1971. DOD and NASA have contributed most to applied research in this field.
- The life sciences more than tripled in funding between 1960 and 1971 and increased their share from 26 percent to 29 percent. The largest investments in this area are made by HEW, followed by USDA and DOD.
- The physical sciences and the environmental sciences combined represented 23 percent of the applied research total in 1960 and 15 percent in 1971. As is the case with basic research, the physical sciences receive more funding than the environmental sciences, and both show major support from DOD and NASA. However, DOD funds are directed more toward the physical sciences and NASA funds more toward the environmental sciences. The physical sciences have additional support from AEC, USDA, and HEW.
- The social sciences reflected the largest relative increase from 1960 to 1971, and their share of the applied research total moved from 2 percent to 5 percent. They receive support chiefly from HEW, USDA, and OEO.
- Psychology and mathematics represented 2 percent and 1 percent, respectively, of the applied research total in 1971.

(For detailed data on this section see appendix tables C-48 through C-66, C-90, C-101, C-106, and C-110.)

SECTION 4.

development

In development the findings and understanding derived from research are directed toward the production of useful materials, devices, systems, and methods; included in such work are the design and improvement of prototypes and new processes. Development activities usually involve engineering and testing to advance a component, product, or process to the point where it meets specific functional or economic requirements. Because development moves toward defined ends, it can be more readily associated with distinct national goals than most research.

THE CURRENT PERIOD

The agencies currently most heavily engaged in th
are shown as follows:

Federal obligations for develo

[Dollars in millio

Agency	
	1969
Total	$10,398
Department of Defense	6,284
National Aeronautics and Space Administration	2,667
Atomic Energy Commission	989
Department of Transportation	160
Department of Health, Education, and Welfare	12
Other agencies	17

- The estimated increase in development obligations for 1972 marks the first rise for development in 5 years. However, a net decline of 4 percent is still registered for the overall 1969–72 period, chiefly the result of NASA's phasing out of the Apollo program.

- In the current period DOD has scheduled the largest dollar increases of any agency, mostly for development of aircraft and ships, while AEC's reductions primarily result from diminished underground testing, and a decline in the NERVA engine development program.

THE CURRENT PERIOD

The agencies currently most heavily engaged in the sponsorship of Federal development programs are shown as follows:

Federal obligations for development, by agency

[Dollars in millions]

Agency	Actual			Estimates			
	1969	1970	Percent change 1969–70	1971	Percent change 1970–71	1972	Percent change 1971–72
Total	$10,398	$9,728	−6.4	$9,392	−3.5	$10,018	+6.7
Department of Defense	6,284	5,804	−7.6	5,941	+2.4	6,698	+12.8
National Aeronautics and Space Administration	2,667	2,390	−10.4	1,770	−25.9	1,627	−8.1
Atomic Energy Commission	989	913	−7.7	883	−3.3	840	−4.9
Department of Transportation	160	229	+43.1	326	+42.3	299	−8.2
Department of Health, Education, and Welfare	123	92	−25.2	118	+28.4	146	+23.7
Other agencies	175	300	+71.4	354	+17.9	408	+15.1

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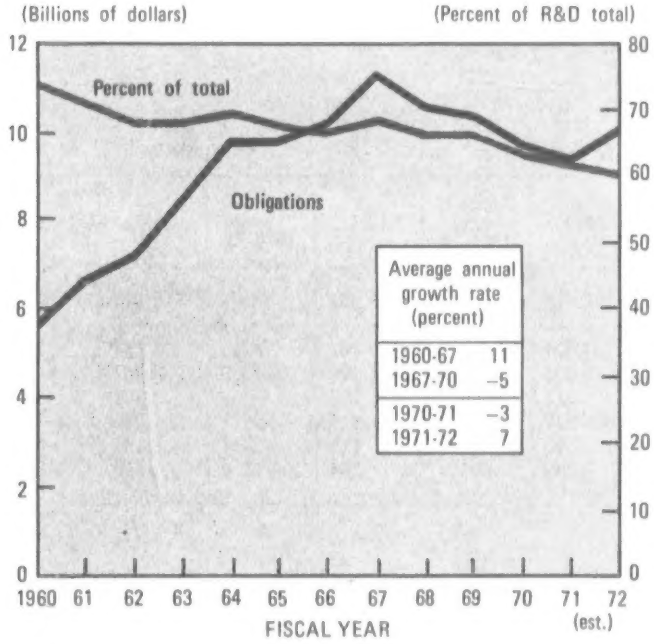
- In the current period DOD has scheduled the largest dollar increases of any agency, mostly for development of aircraft and ships, while AEC's reductions primarily result from diminished underground testing, and a decline in the NERVA engine development program.

- The great bulk of DOT obligations represents support for the civil supersonic transport (SST) aircraft. The data on DOT, of course, do not reflect congressional action on SST development funds for the last 3 months of 1971, or any action on the 1972 budget.

- Within HEW more than one-half of the development effort is concentrated in the Office of Education.

Trends in Federal development obligations



SOURCE: National Science Foundation

TRENDS

- Although development represented the largest dollar share of the R&D total, its rise from 1960 to 1967 was not as rapid as the rise for research. Its share of the R&D total during this period declined from 74 percent to 68 percent.
- From 1967 to 1971 development funding fell steadily, moving below the 1964 level. The development share of the R&D total fell to 61 percent in this period. This loss was influenced more by NASA cutbacks than by any other factor, although in some years DOD reductions played an important part.
- The anticipated upturn in 1972 reaches the 1966 level once again, largely the result of DOD plans. Despite this substantial dollar increase, the development share of the R&D total is expected to be only 60 percent in 1972 because of the greater growth of research.

AGENCIES

- DOD has been the leading supporter of development by a wide margin throughout the 1960–72 period. DOD's share dropped from 86 percent of the Federal total in 1960 to 51 percent in 1966 but is expected to rise to an estimated 67 percent in 1972.
- While DOD's share of the total was declining in the early 1960's, NASA's share was rapidly increasing, from 2 percent in 1960 to a high of 38 percent in 1965. Since then the situation has reversed itself, with the space agency's share dropping to an estimated 16 percent in 1972 and DOD's share rising from its 1966 low to a consistently higher level.
- Until 1963 AEC was second in development obligations. That year it moved to third place after NASA, despite growing R&D programs. Its share of the Federal development total has gradually decreased, from 10 percent in 1960 to an estimated 8 percent in 1972.
- Development growth rates for the other agencies in recent years have been higher than for the DOD–NASA–AEC group. These "other" agencies reflect a share increase from less than 2 percent in 1960 to 9 percent in 1972. The chief contributor to dollar growth within this group has been DOT—largely for work on the SST aircraft. Next has been HEW—largely for programs in education. Together these two agencies are expected to account for 5 percent of the Federal development total in 1972.
- Among the remaining agencies, whose combined programs are expected to be 4 percent of the Federal development total in 1972, chief growth is planned by the Postal Service, EPA, and Interior.

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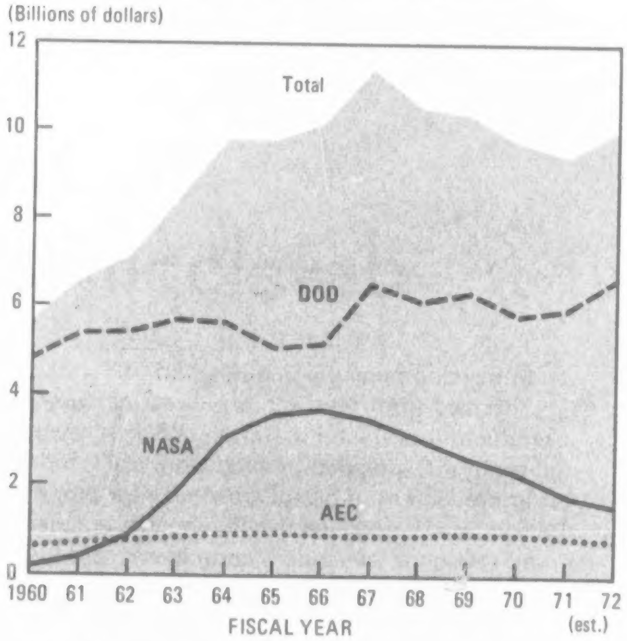
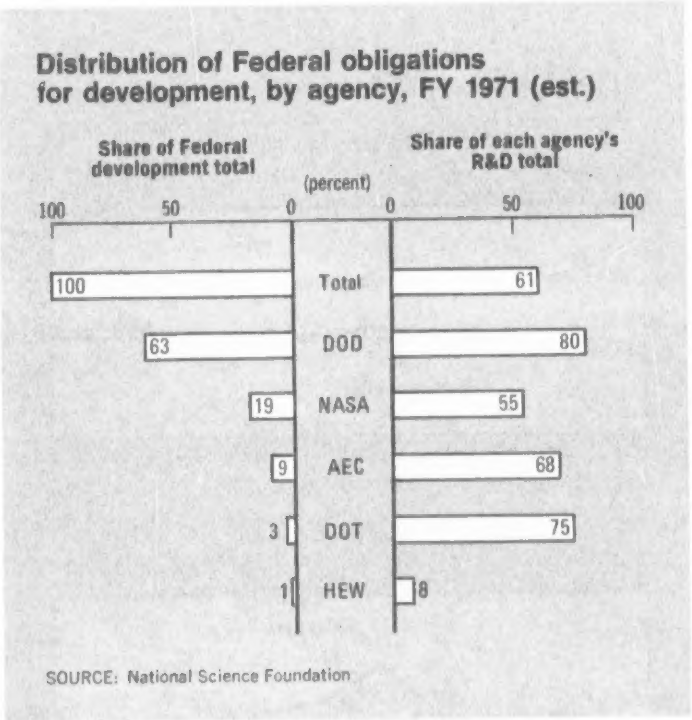
- Among the remaining agencies, whose combined programs are expected to be 4 percent of the Federal development total in 1972, chief growth is planned by the Postal Service, EPA, and Interior.

Trends in Federal obligations for development by selected agencies



SOURCE: National Science Foundation

Distribution of Federal obligations for development, by agency, FY 1971 (est.)



SOURCE: National Science Foundation

- For many agencies the development share in R&D budgets is large because of the high cost of the prototypes, components, expendable materials, and systems design involved in their programs. Such agencies include DOD, NASA, AEC, and DOT, as well as the Postal Service.

- In contrast to the more development-oriented agencies, HEW was expected to direct only 8 percent of its total R&D obligations to development in 1971, most of them within the Office of Education.

- Some development consists of work on new methods, communications techniques, and conceptual tools rather than complex machinery. Examples include new educational curriculums, technical assistance methods, better indices for measuring economic variables, new means of crime detection, or improved job aptitude tests. Even this kind of development may represent a large share of an agency's R&D budget, as in the case of OEO (66 percent in 1971).

PERFORMERS

The performance of Federal development work is ch trial sector, as the following table shows:

Federal obligations for developm

[Dollars in million

Performer	1969
Total	$10,398
Federal intramural	1,726
Industrial firms [a]	7,878
Universities and colleges	127
FFRDC's administered by universities	328
Other nonprofit institutions [a]	310
Other	28

[a] Includes Federally Funded Research and Development Centers (FFRDC's) administered by this s

- Industrial firms received a decreasing amount in Federal development obligations from 1969 to 1971, continuing the decline that started in 1968. The 8-percent rise for industry in 1972 reverses the trend, but funds for this sector are still well below levels of former years.

- Development programs of DOD and NASA have been primarily responsible for the broad trend of funding to industry.

PERFORMERS

The performance of Federal development work is characterized by the predominance of the industrial sector, as the following table shows:

Federal obligations for development, by performer

[Dollars in millions]

Performer	Actual			Estimates			
	1969	1970	Percent change 1969–70	1971	Percent change 1970–71	1972	Percent change 1971–72
Total	$10,398	$9,728	−6.4	$9,392	−3.5	$10,018	+6.7
Federal intramural	1,726	1,843	+6.8	1,827	−.9	1,916	+4.9
Industrial firms [a]	7,878	7,014	−11.0	6,720	−4.2	7,252	+7.9
Universities and colleges	127	121	−4.7	146	+20.2	158	+8.0
FFRDC's administered by universities	328	332	+0.9	334	+.5	342	+2.4
Other nonprofit institutions [a]	310	398	+28.4	331	−16.9	314	−5.1
Other	28	19	−32.1	35	+84.3	36	+2.4

[a] Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

- Industrial firms received a decreasing amount in Federal development obligations from 1969 to 1971, continuing the decline that started in 1968. The 8-percent rise for industry in 1972 reverses the trend, but funds for this sector are still well below levels of former years.

- Development programs of DOD and NASA have been primarily responsible for the broad trend of funding to industry.

- By contrast, development work assigned to Federal intramural laboratories and test facilities in each year of the 1970–72 period reaches a higher total than for any year previous to the current 3-year timespan. DOD has by far the most influence of any agency on trends in intramural development funding.

- Considerably more development is done by university-administered FFRDC's than by universities and colleges proper.

Federal obligations for development, by performer and agency, FY 1971 (est.)

[Dollars in millions]

	TOTAL	DOD	NASA	AEC	DOT	HEW	OTHER
TOTAL	**$9,392**	**$5,941**	**$1,770**	**$883**	**$326**	**$118**	**$354**
Federal intramural	**1,827**	1,425	255	11	38	12	85
Industrial firms	**6,313**	4,176	1,445	269	277	10	136
FFRDC's administered by industrial firms	**407**	6	1	398	–	–	2
Universities and colleges	**146**	28	36	4	1	46	31
FFRDC's administered by universities	**334**	113	27	191	–	2	1
Other nonprofit institutions	**168**	51	5	3	2	18	89
FFRDC's administered by other nonprofit institutions	**162**	126	a	7	4	24	a
Other	**35**	15	a	a	4	5	11

a/ Less than $500,000.

- In 1971 eight out of 10 development dollars directed to industrial firms represented obligations of DOD and NASA. However, virtually all the funds directed to industrially administered FFRDC's came from AEC.

- Three out of four dollars (78 percent of the total) to intramural performance were so directed by DOD. Another 14 percent of all the federally accomplished development work was done by NASA.

- Although universities and colleges still reflect a relatively small share of the development total, their development work is tending to grow.

- University-administered FFRDC's receive practically all of their funding support from AEC and DOD.

- Other nonprofit institutions and FFRDC's administered by them are both more important than universities and colleges proper in development performance.

- The pattern of performance of Federal development has been relatively consistent since 1963 when performer data were first collected. In the current (1970–72) period the share for industry has stabilized at 72 percent, the result of a gradual downward shift from the years just previous. The shift was caused by a substantial decrease in work assigned by DOD and NASA.

- The share performed by Federal personnel has increased from 15 percent in 1963 to 19 percent for each year of the current period, representing a moderate gain for the Federal intramural sector.

(For detailed data on this section see appendix tables C-67 through C-69, C-81, C-91, C-102, and C-107.)

development, by performer and agency, FY 1971 (est.)

[Dollars in millions]

TAL	DOD	NASA	AEC	DOT	HEW	OTHER
392	$5,941	$1,770	$883	$326	$118	$354
827	1,425	255	11	38	12	85
313	4,176	1,445	269	277	10	136
407	6	1	398	—	—	2
146	28	36	4	1	46	31
334	113	27	191	—	2	1
168	51	5	3	2	18	89
162	126	a	7	4	24	a
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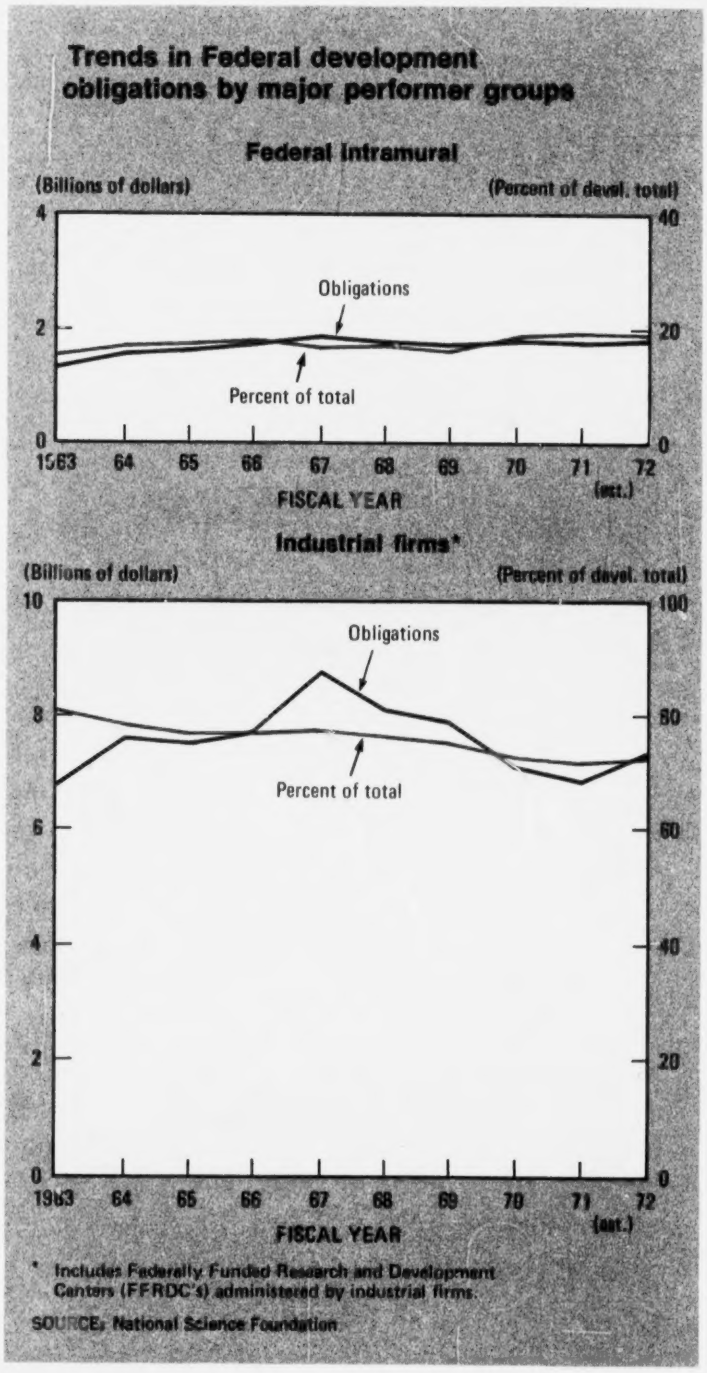

Trends in Federal development obligations by major performer groups

* Includes Federally Funded Research and Development Centers (FFRDC's) administered by industrial firms.

SOURCE: National Science Foundation

SECTION 5.

performers

Many organizations reach beyond their own performing capabilities to meet their R&D objectives. Federal agencies offer the prime example of this method of operation. In 1971 the Federal Government provided funding support for 53 percent of the research and development performed throughout the economy. However, only 13 percent of the national total was accomplished by Government agencies directly.

Certain sectors, notably universities and colleges and other nonprofit institutions, receive most of the funding for their R&D work from sectors outside their own, chiefly from the Federal sector. Even industry, although currently generating about three-fifths of its own R&D support, depends on Federal backing for the rest. Thus, agency decisions on the disposition of R&D workloads have an important effect on the trend of science.

THE CURRENT PERIOD

The 1969–72 period is uneven in that some sectors
1972 all sectors are expected to show gains.

Federal obligations for research and d

[Dollars in m

Performer	196
Total	$15
Federal intramural	3
Industrial firms	8
FFRDC's administered by industrial firms	
Universities and colleges	1
FFRDC's administered by universities	
Other nonprofit institutions	
FFRDC's administered by other nonprofit institutions	
Other domestic performers	
Foreign performers	

[a] Less than 0.5 percent.

- Between 1969 and 1970 most of the decrease in the Federal R&D total reflected the large dollar drop in obligations to industry and the much smaller drop in obligations to universities and colleges.

- Decreases in 1970 mostly stemmed from declining support to industrial firms on the part of DOD—almost entirely Air Force—and NASA.

- However, the 1970 increase for the Federal intramural sector was the greatest dollar increase for this sector in the current period. The 1970 rise was brought about by higher funding on the part of most agencies, especially DOD and NASA, the chief supporters of intramural research and development.

- In 1971 the slight increase in the overall Federal total derived from the fact that most performers received more support, among them universities and colleges, the third most active

THE CURRENT PERIOD

The 1969–72 period is uneven in that some sectors declined in given years while others rose. But in 1972 all sectors are expected to show gains.

Federal obligations for research and development, by type of performer

[Dollars in millions]

Performer	Actual			Estimates			
	1969	1970	Percent change 1969–70	1971	Percent change 1970–71	1972	Percent change 1971–72
Total	$15,637	$15,330	−2.0	$15,387	(a)	$16,662	+8.3
Federal intramural	3,498	3,876	+10.8	3,929	+1.4	4,139	+5.4
Industrial firms	8,698	7,951	−8.6	7,718	−2.9	8,504	+10.2
FFRDC's administered by industrial firms	427	431	+1.0	479	+11.1	498	+4.0
Universities and colleges	1,536	1,473	−4.1	1,617	+9.8	1,826	+13.0
FFRDC's administered by universities	722	750	+3.9	762	+1.7	778	+2.1
Other nonprofit institutions	367	462	+25.9	471	+1.8	484	+2.8
FFRDC's administered by other nonprofit institutions	242	249	+2.9	208	−16.4	211	+1.2
Other domestic performers	96	99	+3.1	136	+38.0	145	+6.8
Foreign performers	51	40	−21.6	68	+68.4	76	+12.4

[a] Less than 0.5 percent.

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- In 1971 the slight increase in the overall Federal total derived from the fact that most performers received more support, among them universities and colleges, the third most active sector. At the same time the decrease for industry, the most heavily supported sector, is slight.

- The 1971 rise for universities and colleges resulted almost entirely from greatly increased support on the part of HEW and NSF, offsetting a decline in support on the part of DOD.

- In 1972 all sectors reflect plans for increased support. Obligations to industrial firms are scheduled to rise far more than they declined in 1971, moving fairly close to the 1969 level, especially when industry-administered FFRDC's are included. The dollar gain for Federal intramural work was about equal to the gain in university and college support.

- In 1970, 1971, and 1972 the Federal intramural sector was scheduled to perform more R&D work in each year than in any year previous; 1972 obligations to universities and colleges are expected to be greater than in any previous year.

TRENDS

- Federal intramural R&D work has risen almost steadily year after year. Between 1960 and 1968 dollar obligations doubled; in 1969 there was scarcely any change. Between 1969 and 1972 obligations are expected to rise by 18 percent.

- The great expansion between 1969 and 1970 was caused by NASA and DOD, agencies that jointly account for approximately three-fourths of all Federal intramural performance. Between 1970 and 1972 growth is expected to be engendered by the combined plans of most of the agencies, strongly counteracting a drop on the part of NASA.

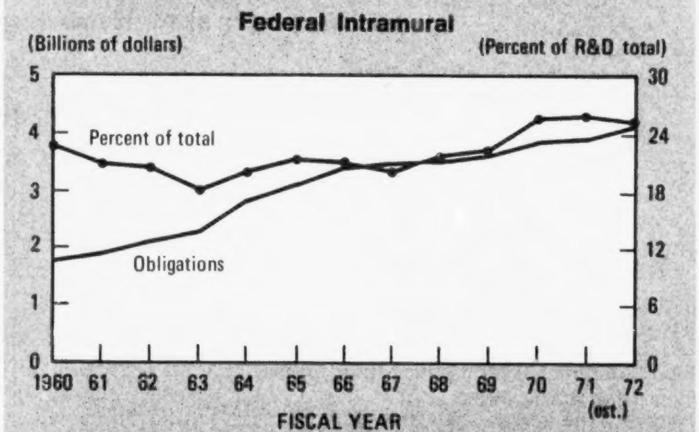
- Besides the extensive laboratories and test facilities of DOD and NASA, those of HEW—especially the National Institutes of Health—are among the more notable Federal R&D installations. USDA and Commerce are other agencies with important R&D facilities of their own. These two agencies rely on intramural resources more fully than on any extramural sector, as do many other agencies.

- In the current (1970–72) period Federal intramural work represents 25 percent or 26 percent of all Federal research and development, a higher level than prevailed in the 1960's.

- Industrial R&D performance is more uneven than that for any other sector. After steady growth between 1960 and 1964, industrial work leveled for 2 years, rose to a peak in 1967, and then declined continuously until 1971. However, in 1972 the 10-percent anticipated rise, with FFRDC's included, is substantial.

- These extensive changes in the federally supported industrial R&D total are principally the net effect of program changes on the part of DOD and NASA. These two agencies account for approximately 90 percent of Federal fund-

Federal R&D obligations by performer group in dollars and in share of R&D total



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SOURCE: National Science Foundation

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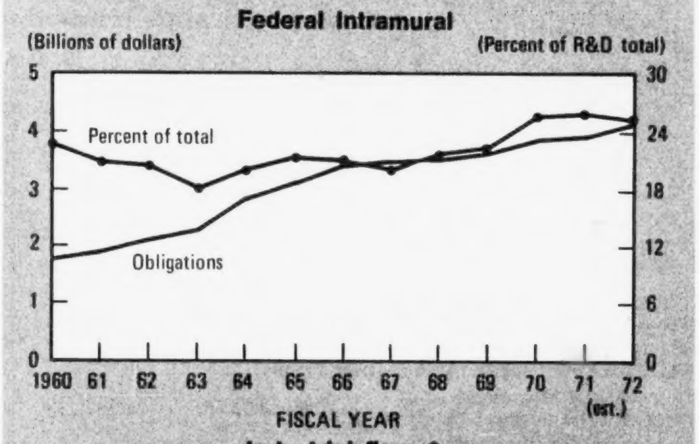
Federal R&D obligations by performer group in dollars and in share of R&D total



* Includes Federally Funded Research and Development Centers (FFRDC's) administered by industrial firms.

SOURCE: National Science Foundation

ing to industry while AEC accounts for approximately 95 percent of Federal funding to industry-administered FFRDC's. For many years industrial R&D performance for the Federal Government has been concentrated on development of weapons, reactors, spacecraft, launch vehicles, aircraft, and support systems.

- The buildup in the industry curve until 1967 was highly influenced by the manned space program (Apollo and its precursors), and the decline thereafter was chiefly brought about by the successful fulfillment of the development phase of the Apollo program. DOD development work sometimes augmented, and sometimes counteracted, these trends.

- In the current (1970–72) period industrial firms (including FFRDC's) account for 53 percent to 55 percent of all Federal R&D performance, contrasted with a 58- to 66-percent range during the 1960's.

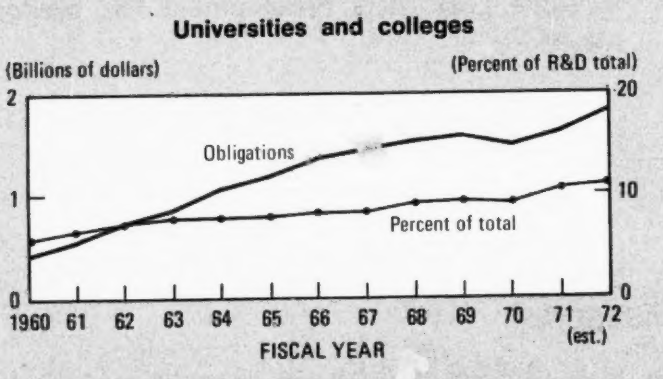
- With one exception, R&D obligations to universities and colleges since 1960 have increased each year; 1970 was the exceptional year, with a 4-percent drop. The share of this sector in the Federal R&D total has gradually moved upward. In 1960 it was 6 percent, but by 1971 and 1972 it is expected to be 11 percent.

- The increases in dollars and in share are indicative of widespread Federal agency use of academic resources. Recent growth has been spurred by HEW and NSF, while DOD, NASA, and AEC continue to use universities and colleges extensively even though their support to this sector is not expanding.

- FFRDC's administered by universities have received between 4 percent and 5 percent of the Federal R&D support total since 1960, and obligations directed to them have grown slowly and steadily. In the current period their share is 5 percent.

- Other nonprofit institutions (including FFRDC's) have received increased support almost steadily since 1960 and in 1971 and 1972 are expected to represent 4 percent of the Federal R&D total.

Federal R&D obligations by performer group in dollars and in share of R&D total



* Includes Federally Funded Research and Development Centers (FFRDC's) administered by nonprofit institutions.

SOURCE: National Science Foundation

FFRDC's

- Federally Funded Research and Development Centers (FFRDC's) are R&D-performing or managing organizations exclusively or substantially financed by one or more Federal agencies. They share the unique advantage of gathering in one location a nucleus of scientists, engineers, and technicians who represent a wide range of disciplines and talents. These specialists work on complex problems in an atmosphere that permits unusual freedom of exchange. The nonprofit character of the FFRDC's makes for objectivity of judgment.

- The chief agency sponsor of FFRDC's is AEC, which operates virtually no laboratories of its own. AEC predominates in the use of industry- and university-administered FFRDC's. They investigate atomic behavior, work on reactor technology, and carry out weapons development and testing.

Federal R&D obligations to Federally Funded Rese by administering sector and agenc

[Dollars in millions]

	TOTAL	AEC	DOD
TOTAL	$1,449	$915	$310
Industrial firms	479	464	9
Universities and colleges	762	432	146
Other nonprofit institutions	208	19	155

Note: See appendix B for list of FFRDC's.

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- DOD predominates in the sponsorship of FFRDC's administered by other nonprofit institutions. It nearly equaled NASA in 1971 in support of university-administered FFRDC's.

- HEW's 27 FFRDC's in 1971 were all sponsored by the Office of Education. They seek solutions to problems in education and apply and test new ideas and theories.

- Of NSF's five university or university-consortia-administered FFRDC's, four are astronomical observatories, and the fifth is the National Center for Atmospheric Research.

Federal R&D obligations to Federally Funded Research and Development Centers, by administering sector and agency, FY 1971 (est.)

[Dollars in millions]

	TOTAL	AEC	DOD	NASA	HEW	NSF	OTHER
TOTAL	$1,449	$915	$310	$149	$35	$33	$7
Industrial firms	479	464	9	3	–	1	2
Universities and colleges	762	432	146	145	7	31	1
Other nonprofit institutions	208	19	155	1	28	1	4

Note: See appendix B for list of FFRDC's.

CHARACTER OF WORK

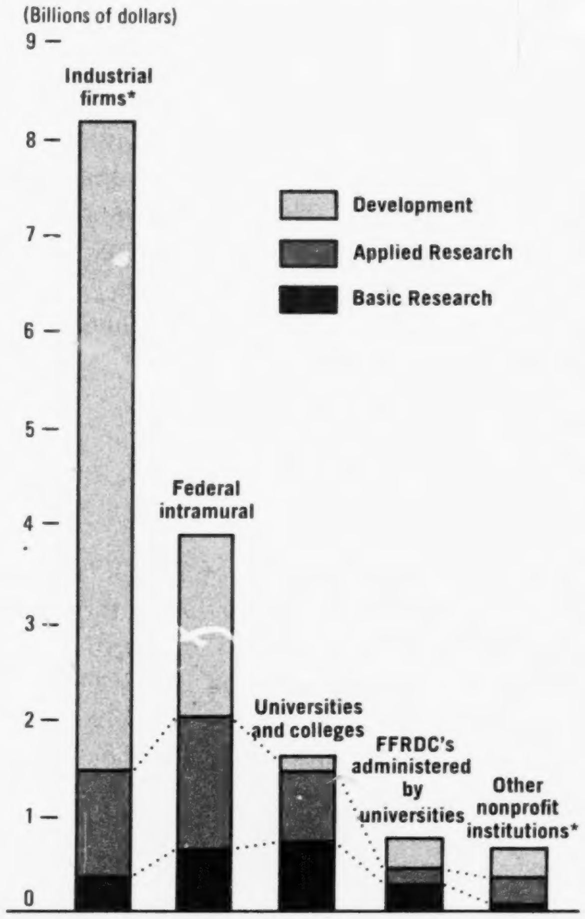
- Industry is the leading R&D performance sector, and work in this sector is concentrated in development (82 percent of the industry R&D total in 1971). Industrial firms in 1971 were expected to accomplish 2½ times the development of all other sectors combined.

- However, research is also performed by industry, and the dollar amount in 1971 was scheduled to be almost the same as research performed by universities and colleges for Federal agencies. But within the industry research effort, basic research is much less important than applied research.

- The Federal intramural sector is second in size of R&D performance as well as second in size of the development effort in 1971 (after industry) and second in size of basic research performed (after universities and colleges). Yet this sector is **first** in the amount of applied research performed. In 1971 the Federal sector accounted for 37 percent of all federally supported applied research.

- In 1971 approximately three-fifths of the intramural R&D total represented personnel costs, i.e., salaries and related allowances for scientists and engineers and other intramural support personnel. The share for personnel costs was about the same for performance of basic research, applied research, and development.

Obligations for performance of Federal research and development by performer and by character of work, FY 1971 (est.)



* Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

SOURCE: National Science Foundation

- Universities and colleges are generally considered the most logical sector for the performance of basic research, and they have led in its performance for many years. In 1971 they were the only sector where basic research was almost one-half of the total Federal research and development performed. That year they were also expected to account for 34 percent of the federally supported basic research undertaken in all sectors.

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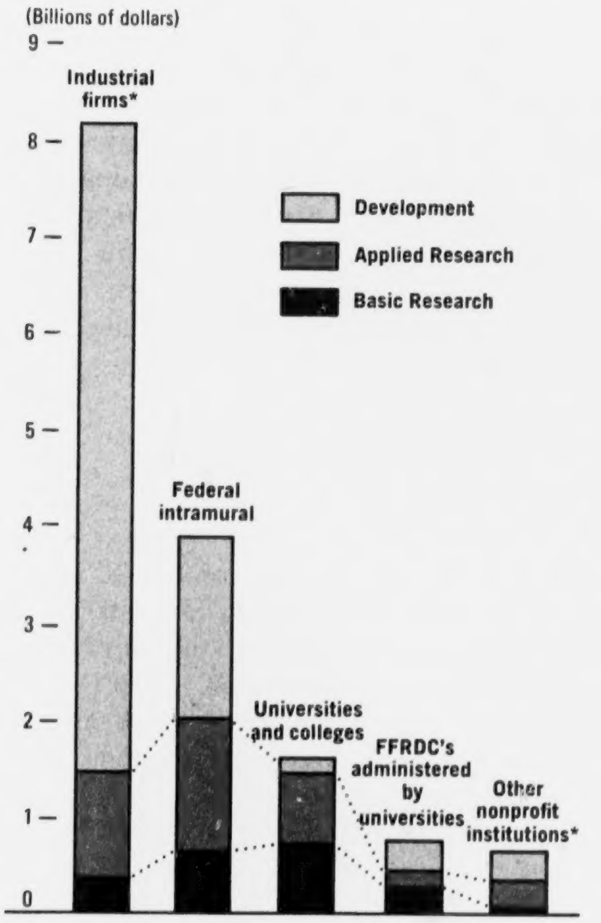

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- FFRDC's administered by universities continue to be focused more on development and on basic research than on applied research. In 1971 they were expected to conduct more development than universities and colleges proper.

- Other nonprofit institutions in 1971 are most heavily engaged in applied research although in some past years development has predominated.

AGENCIES

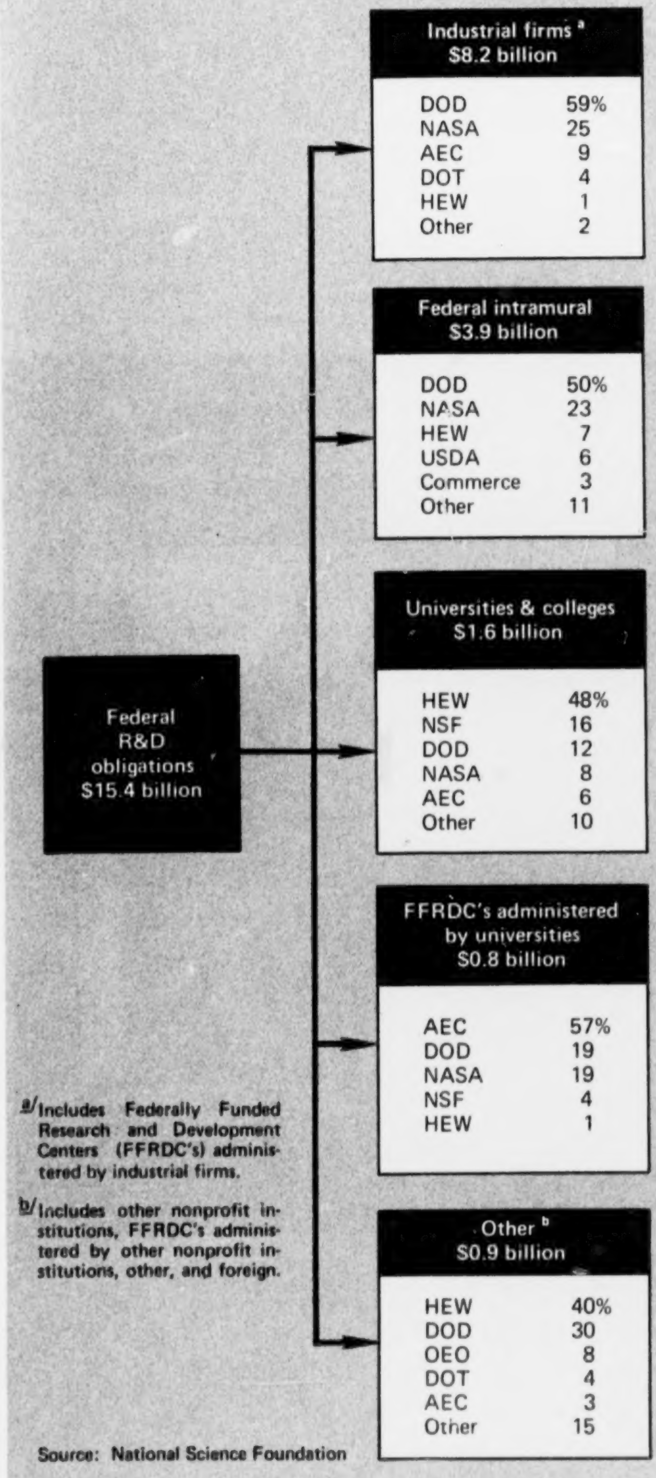
- In each sector one or two agencies provide the dominant support.

- Except among universities and colleges, DOD is either the first or second agency in each sector in dollar support.

- NASA or HEW appears as either the first or second support agency in four sectors out of five.

- The relative shares of support provided by different agencies vary over time, but the present pattern is fairly representative of recent years.

Federal R&D obligations to performers, by agency, FY 1971 (est.)



Industrial firms[a] $8.2 billion	
DOD	59%
NASA	25
AEC	9
DOT	4
HEW	1
Other	2

Federal intramural $3.9 billion	
DOD	50%
NASA	23
HEW	7
USDA	6
Commerce	3
Other	11

Universities & colleges $1.6 billion	
HEW	48%
NSF	16
DOD	12
NASA	8
AEC	6
Other	10

FFRDC's administered by universities $0.8 billion	
AEC	57%
DOD	19
NASA	19
NSF	4
HEW	1

Other[b] $0.9 billion	
HEW	40%
DOD	30
OEO	8
DOT	4
AEC	3
Other	15

a/ Includes Federally Funded Research and Development Centers (FFRDC's) administered by industrial firms.

b/ Includes other nonprofit institutions, FFRDC's administered by other nonprofit institutions, other, and foreign.

Source: National Science Foundation

FOREIGN PERFORMERS

This category includes only foreign scientists, organizations, or governments that carry on federally sponsored R&D projects outside the United States.[1] R&D work is contracted for in other countries because of unique natural conditions, or unusual materials, or specialized talents or facilities required for the conduct of particular projects, which are found in these countries and not in the United States.

- Foreign performance in 1971 was expected to amount to $68 million, approximately two-fifths of 1 percent of the Federal R&D total; the requested figure for 1972 is $76 million.

- Federal agencies support foreign research and development from two sources: (1) regular appropriations and (2) "special foreign currency programs," which use excess foreign currencies made available largely under provisions of the Agricultural Trade Development and Assistance Act of 1954 (Public Law 480), as amended.

- Since 1965 there has been a general upward trend in foreign research and development supported through special foreign currency programs, and a general downward trend in that supported by regular appropriations. The distribution of foreign R&D obligations by country is increasingly determined by the availability of excess currencies.

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[1] Excluded are funds for federally financed projects performed abroad by U.S. Government employees or Federal agencies or by private U.S. organizations; also funds for support of American scientists working abroad or foreign scientists working in the United States.

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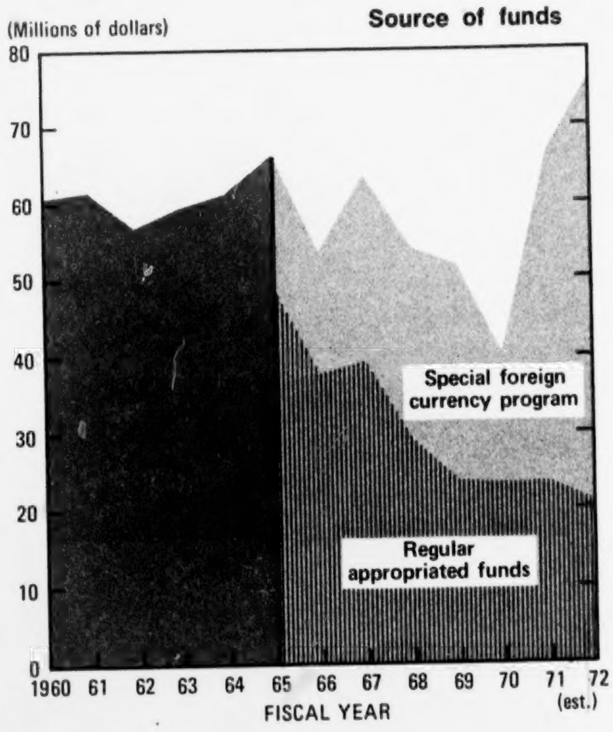
Trends in Federal R&D obligations to foreign performers



SOURCE: National Science Foundation

- HEW is the leading agency user of excess foreign currencies for R&D performance while DOD is the leading agency user of regular appropriations.

- More than 4 out of every 5 dollars obligated for foreign performance in the current period are scheduled for research support, with applied research receiving the greatest share.

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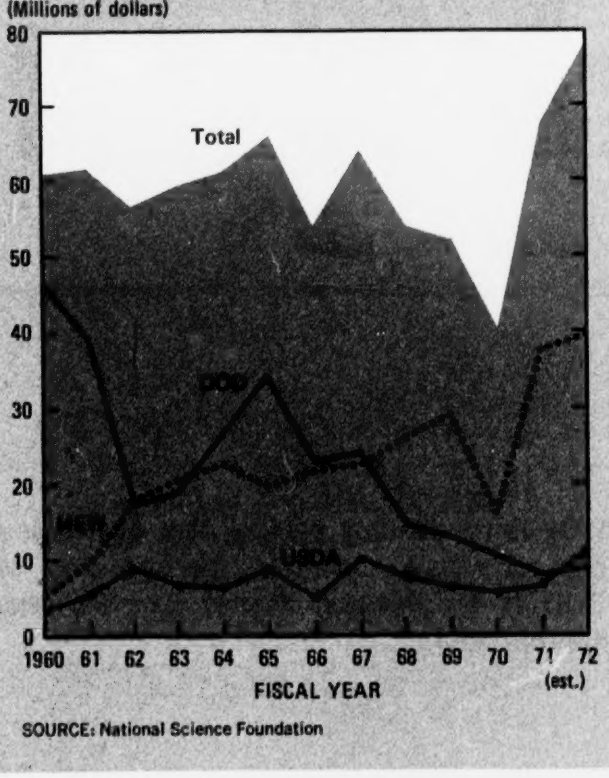


Trends in Federal R&D obligations to foreign performers

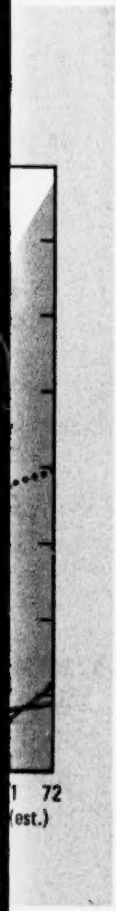
By agency

SOURCE: National Science Foundation

Agencies and Regions

- Three agencies, HEW, DOD, and Agriculture, have provided more than 75 percent of Federal support to foreign R&D performance throughout the 1960–72 period.
- Within HEW, the National Institutes of Health, the Health Services and Mental Health Administration, and the Social and Rehabilitation Service are the major contributors to foreign research and development. Most of HEW's support goes to countries designated as excess foreign currency areas. Five such countries—Yugoslavia, India, Poland, Israel, and Pakistan—together were expected to receive 73 percent of the 1971 total.
- Within DOD, the Navy is the largest source of foreign R&D support in the current period. DOD's support is scattered widely; Europe receives more of the funds than any other region, and Canada receives more funds than any other country.
- All of USDA's support is provided through the special foreign currency program. The Agricultural Research Service is the major contributor, with Yugoslavia, India, Pakistan, and Israel the major countries supported.
- Throughout the 1960–72 period Europe has remained the major foreign region used for foreign R&D projects. Since 1968 Yugoslavia has been the leading European country supported, and since 1969 it has been the leading recipient of funds among all countries.
- Asia, the second region in support, is scheduled for a doubling in its support level in 1971, mainly the result of substantial increases to India and Pakistan.
- Israel continues to be the chief performing country in the Near East. It receives most of its funds from HEW and USDA.

(For detailed data on this section see appendix tables C-7 through C-12, C-29 through C-31, C-48 through C-50, C-67 through C-69, C-74 through C-81, C-88 through C-91, C-103 through C-107.)



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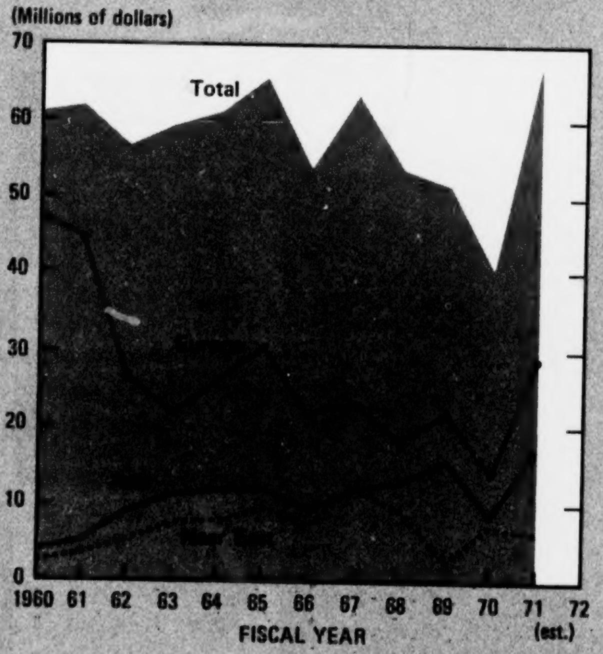
Trends in Federal R&D obligations to foreign performers

By major region



SOURCE: National Science Foundation

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SECTION 6.

agencies

Federal agencies have increasingly turned to research and development as a means of accomplishing a number of ends. In broad terms, agencies use the methodology and resources of science because of:

(1) their heavy dependence on the development and operation of advanced machinery and instrumentation, or

(2) their need to create new programs or redirect existing ones, or

(3) their own position as a source of support for fundamental research to further the Nation's knowledge base.

THE CURRENT PERIOD

Between 1969 and 1972 the leading R&D support agen

Federal obligations for research and

[Dollars in millio

Agency	
	1969
Total	$15,63
Department of Defense	7,69
National Aeronautics and Space Administration	3,96
Department of Health, Education, and Welfare	1,29
Atomic Energy Commission	1,40
Department of Transportation	22
National Science Foundation	27
Department of Agriculture	26
Department of the Interior	20
Department of Commerce	7
Environmental Protection Agency	----
Office of Economic Opportunity	7
Other agencies	16

[a] Less than 0.5 percent.

- While total Federal R&D obligations are scheduled to increase 7 percent from 1969 to 1972, three of the important R&D agencies—NASA, AEC, and Interior— reveal net decreases, although the decrease for Interior is slight.

- NASA's estimate for 1972 represents the smallest year-to-year reduction since the downward trend for this agency started in 1967. The increases planned in a number of key programs almost offset decreases in the Apollo lunar landing program, which is scheduled for completion in 1972. These growing programs include the Skylab and the space shuttle transportation system; the Viking unmanned orbiter-lander exploration of Mars; the Grand Tour unmanned missions to the outer planets; and the earth resources satellite, which will provide information on the utilization of data from space toward understanding and managing earth resources.

THE CURRENT PERIOD

Between 1969 and 1972 the leading R&D support agencies showed the following changes in funding:

Federal obligations for research and development, by agency

[Dollars in millions]

Agency	Actual			Estimates			
	1969	1970	Percent change 1969–70	1971	Percent change 1970–71	1972	Percent change 1971–72
Total	$15,637	$15,330	−2.0	$15,387	([a])	$16,662	+8.3
Department of Defense	7,696	7,360	−4.4	7,420	+0.8	8,332	+12.3
National Aeronautics and Space Administration	3,963	3,800	−4.1	3,248	−14.5	3,188	−1.8
Department of Health, Education, and Welfare	1,297	1,221	−5.9	1,480	+21.2	1,635	+10.5
Atomic Energy Commission	1,406	1,346	−4.3	1,307	−2.9	1,251	−4.2
Department of Transportation	228	317	+39.0	437	+37.6	483	+10.6
National Science Foundation	274	289	+5.5	345	+19.4	494	+43.3
Department of Agriculture	260	281	+8.1	303	+7.7	314	+3.7
Department of the Interior	208	158	−24.0	185	+17.2	204	+10.4
Department of Commerce	72	122	+69.4	158	+29.9	182	+15.1
Environmental Protection Agency	-------	89	-------	116	+31.3	144	+24.3
Office of Economic Opportunity	71	123	+73.2	116	−6.3	100	−13.5
Other agencies	162	224	+38.3	272	+21.4	335	+22.8

[a] Less than 0.5 percent.

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- AEC's net decrease of 11 percent from 1969 to 1972 stems largely from cutbacks in the underground testing of nuclear weapons, in space propulsion systems, and in space electric power development. These reductions are partially offset by acceleration of the program to develop an economic liquid-metal fast-breeder power reactor.

- Interior's net decrease resulted from a 1970 drop that was entirely due to the transfer of the Bureau of Commercial Fisheries to Commerce (NOAA) and the Federal Water Pollution Control Administration to EPA. Thereafter increases occurred, and the largest increase from 1970 to 1972 is for research and development related to health and safety hazards in mining.

CTION 6.

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- In 1972 DOD's programs are expected to grow substantially, and programs contributing to the large increase include work on the B–1 aircraft, the Safeguard antiballistic missile system, the undersea long-range ballistic missile system (ULMS), the F–15 fighter aircraft, and the A–X close air support aircraft. Partially offsetting the increases is the phasing down or the completion of development on such undertakings as the F–14 fighter/interceptor, the Minuteman intercontinental ballistic missile system, the Poseidon fleet ballistic missile, and the S-3A antisubmarine warfare aircraft.

- HEW, despite a drop from 1969 to 1970, is expected to record an overall gain of 26 percent in the 1969–72 period. Increases are brought about by vocational education research and innovative R&D programs in the Office of Education; research in heart disease and cancer in the National Institutes of Health; and the research and development sponsored by the recently organized Office of Child Development, to name some of the more outstanding programs.

- DOT's current increases derive from work on the supersonic transport aircraft[1] and also from research and development connected with air traffic control, urban mass transportation, and national highway safety programs.

- NSF shows one of the largest net gains among all agencies in the 1969–72 period, with an increase of 80 percent. It also reflects the largest relative increase of any agency from 1971 to 1972. Part of the 1972 rise is for programs transferred to NSF from other agencies, such as the National Magnet Laboratory from DOD (Air Force), the interdisciplinary material sciences laboratories from DOD's Advanced Research Projects Agency, and logistic support for the U.S. Antarctic research program from DOD (Navy). Other parts of the 1972 rise cover expanded support to coordinated research efforts to develop scientific knowledge for the solution of national problems and increased support of basic research in all major scientific disciplines.

- Commerce recorded a large increase in its R&D programs from 1969 to 1970, due largely to the transfer of various marine-related activities from Interior, DOD, DOT, and NSF to the new National Oceanic and Atmospheric Administration (NOAA) within Commerce. The R&D programs of NOAA, which also includes the former Environmental Science Services Administration (ESSA), are expected to increase substantially from 1970 to 1972.

- The Environmental Protection Agency (EPA) conducts research and development in the areas of water and air pollution, pesticides, radiation, and solid wastes. These programs were formerly performed by HEW, Interior, and USDA. All these areas are expected to receive increased emphasis from 1970 to 1972.

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[1] Data do not reflect congressional action on funds for the SST for the last 3 months of fiscal year 1971 or any action for 1972.

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TRENDS

- During the 1960–67 period, while DOD's R&D obligations were increasing, its share of the R&D total was decreasing—from 76 percent to 49 percent. From 1967 to 1970 a moderate decline was experienced. DOD's 1972 estimate represents the first significant increase since 1967, but its share of the Federal R&D total is little affected.

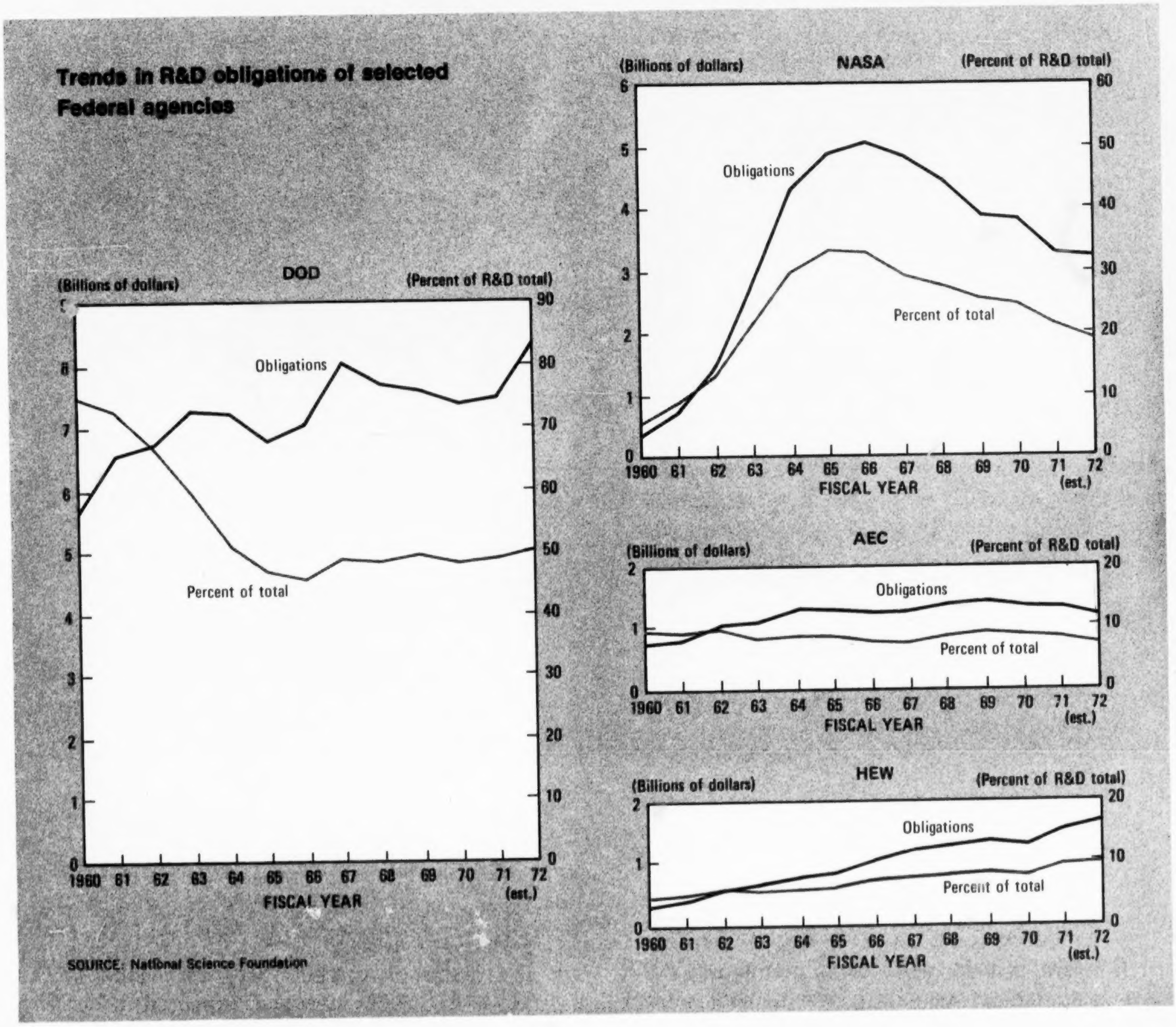
- NASA's R&D program totals have declined each year since the 1966 peak, and NASA's share of the Federal R&D total has also declined since that time—from 33 percent to an estimated 19 percent in 1972.

- AEC's obligations grew steadily from 1960 to 1969, but in recent years they have declined. AEC accounted for 10 percent of the R&D total in 1960, compared with an estimated 8 percent for 1972.

- The combined R&D programs of DOD, NASA, and AEC dropped from 91 percent of the R&D total in 1960 to 86 percent in 1967 and are expected to decrease further to 77 percent in 1972.

- The programs of DOD, NASA, and AEC are complementary in a number of ways, and many of them are conducted jointly. Their missions tend to be concerned with putting into operation complex end products of technology that involve advanced engineering and systems management. Their R&D requirements lean toward the same fields of science, draw on the same kinds of performers and often the same contractors.

- In 1971 HEW became the third largest R&D supporter. Its R&D obligations reveal the reverse of the DOD–NASA–AEC trend. They have increased from $320 million in 1960 to an estimated $1.6 billion in 1972, with only one year of decline; meanwhile HEW's share of the R&D total shows an increase from 4 percent to 10 percent.

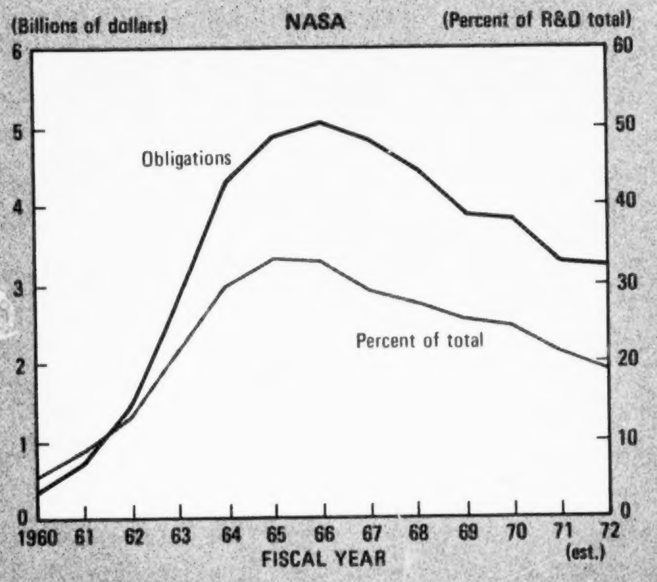


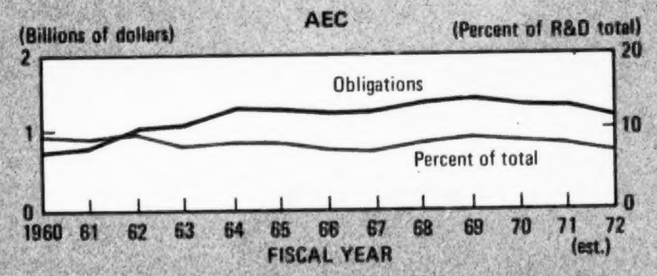
Trends in R&D obligations of selected Federal agencies

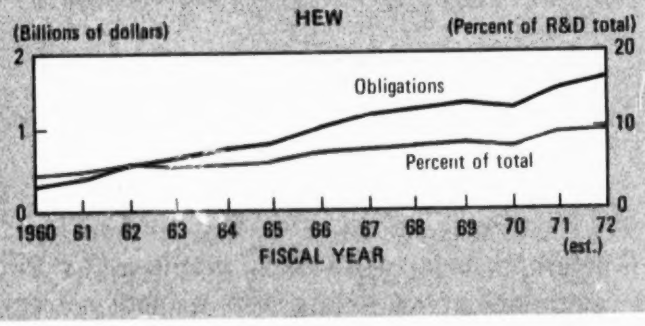
SOURCE: National Science Foundation

- However, other agencies have also played a growing part in the overall support of research and development. In the current period 29 other agencies reported R&D obligations. In the 1960–72 period the combined R&D total of the "other agency" group will have increased from $389 million to a projected $2.3 billion, and their share of the Federal R&D total from 5 percent to 14 percent.

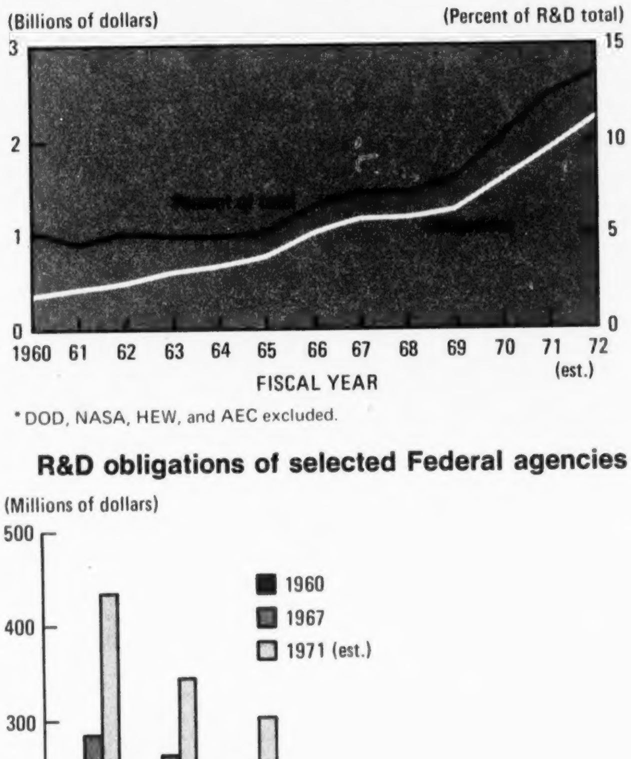
- DOT, NSF, USDA, Interior, Commerce, and OEO are chiefly responsible for the significant gains of the "other agency" group. The R&D programs of most of the agencies in this group as well as HEW are more research oriented than those of DOD–NASA–AEC. DOT and the Postal Service are the only agencies in the "other agency" group primarily engaged in development in the machinery-and-systems areas.





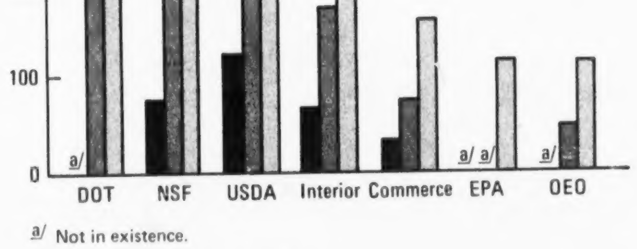


Trends in R&D obligations of the "other" Federal agencies*



* DOD, NASA, HEW, and AEC excluded.

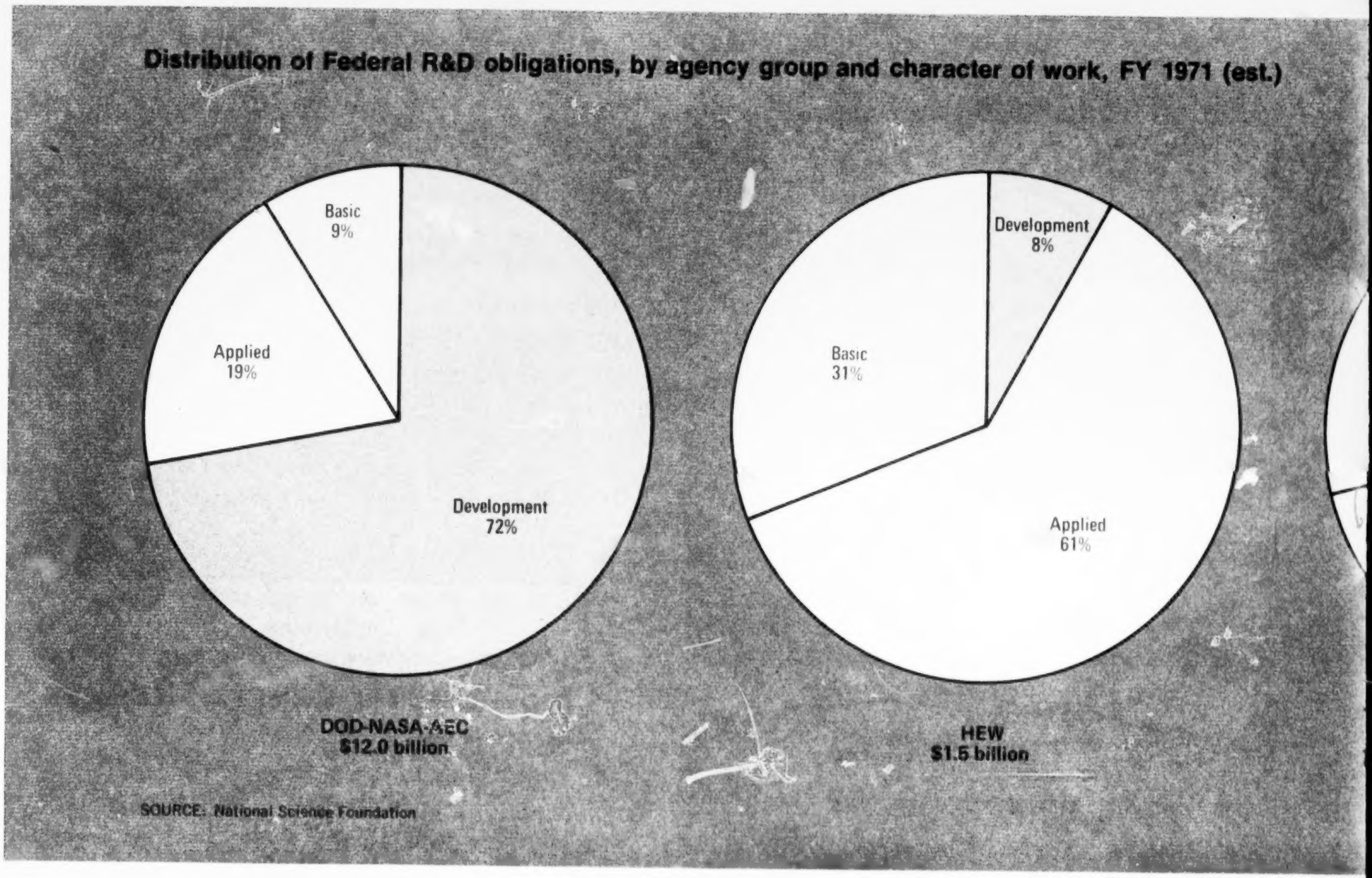
R&D obligations of selected Federal agencies



a/ Not in existence.

SOURCE: National Science Foundation

- DOT, NSF, USDA, Interior, Commerce, and OEO are chiefly responsible for the significant gains of the "other agency" group. The R&D programs of most of the agencies in this group as well as HEW are more research oriented than those of DOD–NASA–AEC. DOT and the Postal Service are the only agencies in the "other agency" group primarily engaged in development in the machinery-and-systems areas.



Distribution of Federal R&D obligations, by agency group and character of work, FY 1971 (est.)

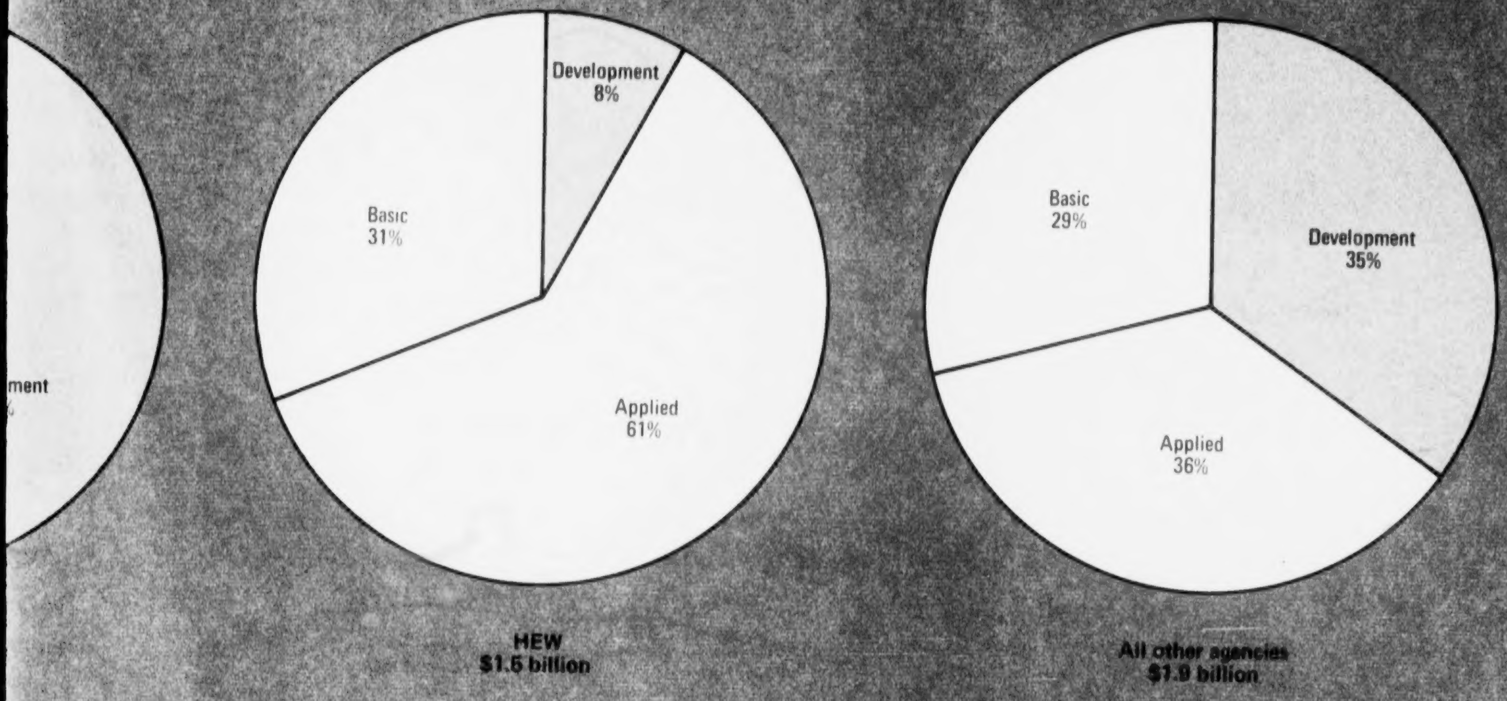
SOURCE: National Science Foundation

CHARACTER OF WORK

- In 1971 the share of development in the combined R&D total of DOD, NASA, and AEC was expected to be 72 percent. For HEW it was expected to be 8 percent and for the "other" agencies, 35 percent.

- The 29 "other" agencies and HEW are more concerned with socially oriented development than the DOD–NASA–AEC group, which concentrates development on costly and complex hardware items. The "other" agencies and HEW are involved with such problems as the development of working program models from accepted hypotheses concerning the causes of poverty; the determination of public acceptance of different means of mass transportation; experimental schools; curriculum development; the development of improved procedures for preparation, care, and preservation of food; and the development of evaluative instruments and norms for young children. The chief exception to development of the foregoing nature in the "other agency" group is DOT's work on the SST aircraft.

ligations, by agency group and character of work, FY 1971 (est.)



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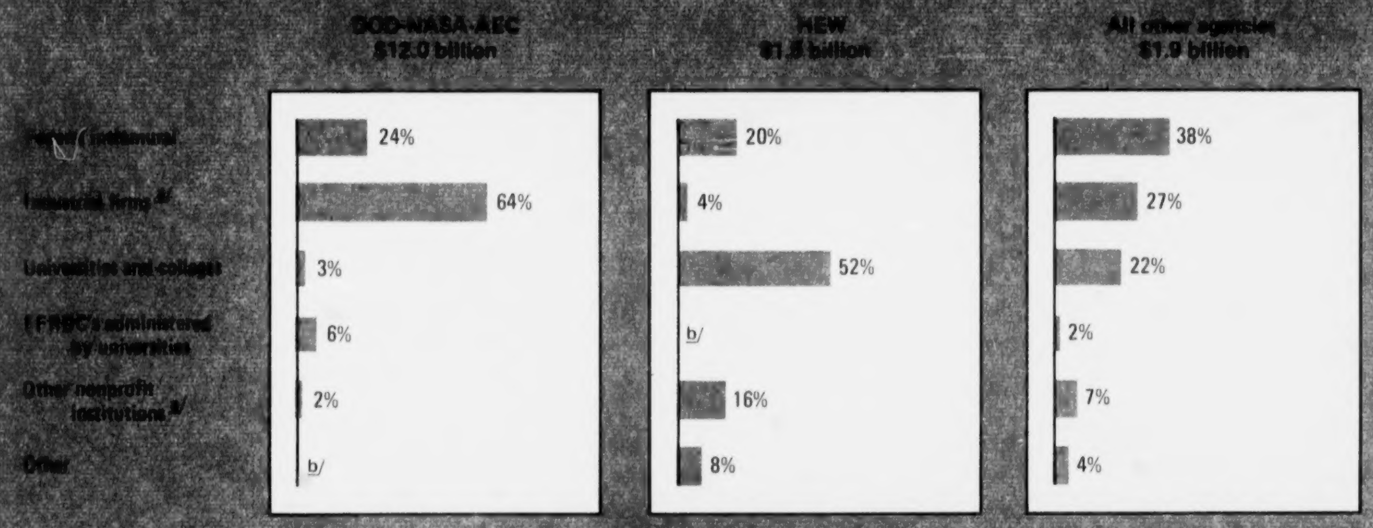
HEW are involved with such problems as the development of working program models from accepted hypotheses concerning the causes of poverty; the determination of public acceptance of different means of mass transportation; experimental schools; curriculum development; the development of improved procedures for preparation, care, and preservation of food; and the development of evaluative instruments and norms for young children. The chief exception to development of the foregoing nature in the "other agency" group is DOT's work on the SST aircraft.

- The share of applied research in the DOD–NASA–AEC R&D total was expected to be only 19 percent in 1971, compared with 36 percent within the "other agency" total and 61 percent within the HEW total.

- The share of basic research in the DOD–NASA–AEC total was expected to be only 9 percent in 1971, but it was more than three times that percentage for HEW and "other" agencies.

Distribution of Federal R&D obligations to performing sectors, by agency groups, FY 1971 (est.)



a/ Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

b/ Less than 0.5 percent.

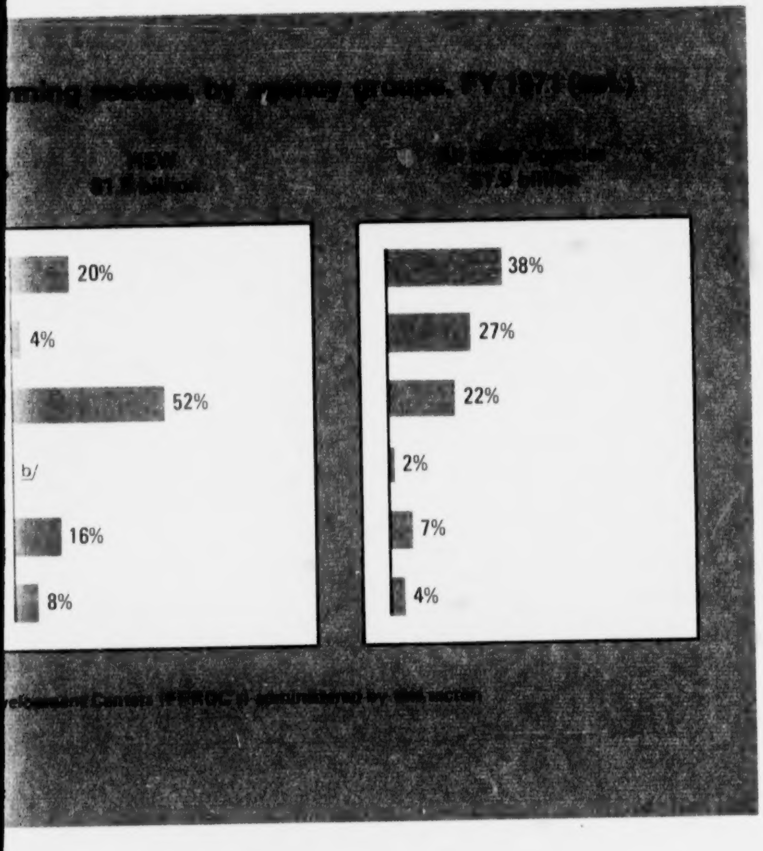
SOURCE: National Science Foundation.

PERFORMERS

- Industrial firms make up by far the largest performing sector for the DOD–NASA–AEC group, accounting for an estimated 64 percent of its R&D total in 1971. By contrast, industrial performance was expected to represent only 4 percent of the HEW total and 27 percent of the "other agency" total in 1971.

- Universities and colleges were expected to receive more than 50 percent of HEW's R&D funds and 22 percent of the "other agency" funds in 1971, whereas DOD–NASA–AEC planned to direct only 3 percent of their joint R&D obligations to this sector.

- The Federal intramural sector is strong in all three agency groups. It is the largest performing sector for the "other agency" group.



- Universities and colleges were expected to receive more than 50 percent of HEW's R&D funds and 22 percent of the "other agency" funds in 1971, whereas DOD–NASA–AEC planned to direct only 3 percent of their joint R&D obligations to this sector.

- The Federal intramural sector is strong in all three agency groups. It is the largest performing sector for the "other agency" group.

Major characteristics of R&D obligations of Federal agencies, fiscal year 1971 (est.)

Agency and subdivision	Total R&D obligations (millions of dollars)	R&D obligations as percent of total agency budget[a]	Total research and development				Basic research		Applied research		Development
			Character of work (percent distribution)			Major performers[b] (percent of total)	Major fields of science[b] (percent of total)	Major performers[b] (percent of total)	Major fields of science[b] (percent of total)	Major performers[b] (percent of total)	Major performers[b] (percent of total)
			Basic research	Applied research	Development						
Department of Agriculture, total	$302.8	4	41	56	3	75 Intra. 22 Univ.	66 Life 15 Phy. Sci. 9 Soc. 9 Eng.	74 Intra. 22 Univ.	58 Life 15 Soc. 12 Phy. Sci. 12 Eng	74 Intra. 24 Univ.	95 Intra.
Agricultural Research Service	172.3	—	45	50	5	94 Intra.	69 Life 20 Phy. Sci. 11 Eng.	93 Intra.	62 Life 20 Phy. Sci. 16 Eng.	96 Intra.	94 Intra.
Cooperative State Research Service	67.0	—	38	62	—	96 Univ.	69 Life 22 Soc.	96 Univ.	69 Life 22 Soc.	96 Univ.	—
Economic Research Service	15.7	—	29	71	—	99 Intra.	100 Soc.	99 Intra.	100 Soc.	99 Intra.	—
Farmer Cooperative Service	.9	—	25	75	—	92 Intra. 8 Univ.	100 Soc.	100 Intra.	100 Soc.	89 Intra. 11 Univ.	—
Forest Service	45.9	—	34	64	2	97 Intra.	70 Life 10 Phy. Sci. 10 Eng. 8 Environ.	92 Intra.	58 Life 17 Eng. 10 Soc. 9 Environ.	100 Intra.	100 Intra.
National Agricultural Library	.3	—	—	100	—	39 Intra. 39 N.P. 12 Ind. 10 Univ.	—	—	100 Other	39 Intra. 39 N.P. 12 Ind. 10 Univ.	—
Statistical Reporting Service	.7	—	11	58	31	76 Intra. 14 Ind. 11 Univ.	83 Math. 17 Soc.	51 Intra. 49 Univ.	63 Soc. 37 Math.	68 Intra. 23 Ind. 9 Univ.	100 Intra.
Department of Commerce, total	157.9	12	31	50	19	70 Intra. 20 Ind.	31 Environ. 27 Phy Sci. 19 Life 10 Soc. 10 Eng.	92 Intra.	33 Eng. 29 Life 18 Environ. 8 Phy. Sci.	67 Intra. 24 Ind.	45 Ind. 43 Intra
Bureau of the Census	4.3	—	10	41	49	99 Intra.	58 Math. 36 Psych.	85 Intra. 8 Univ.	60 Soc. 34 Psych.	100 Intra.	100 Intra.
Economic Development Administration	5.4	—	—	34	66	30 Univ. 29 Intra. 26 Ind. 10 Other	—	—	100 Soc.	36 Intra. 36 Ind. 24 Univ.	33 Univ. 25 Intra. 22 Ind. 14 Other
Maritime Administration	24.3	—	—	72	28	92 Ind.	—	—	91 Eng. 9 Soc.	93 Ind.	89 Ind. 11 Univ.
National Bureau of Standards	31.7	—	47	44	9	97 Intra	77 Phy Sci. 20 Eng	97 Intra.	50 Eng. 36 Phy. Sci. 9 Other	97 Intra.	91 Intra. 9 For.

						8 Univ.				11 Univ.	
Forest Service	45.9	—	34	64	2	97 Intra.	70 Life 10 Phy. Sci. 10 Eng. 8 Environ.	92 Intra.	58 Life 17 Eng. 10 Soc. 9 Environ.	100 Intra.	100 Intra.
National Agricultural Library	.3	—	—	100	—	39 Intra. 39 N.P. 12 Ind. 10 Univ.	—	—	100 Other	39 Intra. 39 N.P. 12 Ind. 10 Univ.	—
Statistical Reporting Service	.7	—	11	58	31	76 Intra. 14 Ind. 11 Univ.	83 Math. 17 Soc.	51 Intra. 49 Univ.	63 Soc. 37 Math.	68 Intra. 23 Ind. 9 Univ.	100 Intra.
Department of Commerce, total	157.9	12	31	50	19	70 Intra. 20 Ind.	31 Environ. 27 Phy Sci. 19 Life 10 Soc. 10 Eng.	92 Intra.	33 Eng. 29 Life 18 Environ. 8 Phy. Sci.	67 Intra. 24 Ind.	45 Ind. 43 Intra
Bureau of the Census	4.3	—	10	41	49	99 Intra.	58 Math. 36 Psych.	85 Intra. 8 Univ.	60 Soc. 34 Psych.	100 Intra.	100 Intra.
Economic Development Administration	5.4	—	—	34	66	30 Univ. 29 Intra. 26 Ind. 10 Other	—	—	100 Soc.	36 Intra. 36 Ind. 24 Univ.	33 Univ. 25 Intra. 22 Ind. 14 Other
Maritime Administration	24.3	—	—	72	28	92 Ind.	—	—	91 Eng. 9 Soc.	93 Ind.	89 Ind. 11 Univ.
National Bureau of Standards	31.7	—	47	44	9	97 Intra	77 Phy Sci. 20 Eng	97 Intra.	50 Eng. 36 Phy. Sci. 9 Other	97 Intra.	91 Intra. 9 For.
National Oceanic and Atmospheric Administration	85.0	—	33	50	17	78 Intra. 10 Ind.	55 Environ. 33 Life	87 Intra.	54 Life 33 Environ.	81 Intra. 9 Other	50 Intra. 45 Ind.
Office of Business Economics	4.0	—	100	—	—	100 Intra.	100 Soc.	100 Intra	—	—	—
Office of Telecommunications	2.6	—	82	18	—	100 Intra.	53 Phy. Sci. 27 Eng. 20 Math.	100 Intra.	100 Eng.	100 Intra.	—
Patent Office	.6	—	—	81	19	100 Intra.	—	—	100 Other	100 Intra.	100 Intra.
Department of Defense, total	7,420.2	10	3	17	80	65 Ind. 27 Intra.	27 Phy. Sci. 25 Eng. 23 Environ. 12 Life 9 Math.	46 Univ. 42 Intra. 9 Ind.	70 Eng. 11 Phy. Sci.	51 Ind. 37 Intra.	70 Ind. 24 Intra.
Department of the Army	1,691.1	—	3	12	85	56 Ind. 38 Intra.	35 Life 24 Phy. Sci. 22 Eng. 11 Environ.	60 Intra. 33 Univ.	52 Eng. 20 Phy. Sci. 14 Life	75 Intra. 16 Ind.	64 Ind. 32 Intra.
Department of the Navy	2,236.9	—	4	8	88	60 Ind. 33 Intra.	35 Environ. 27 Phy. Sci. 15 Eng. 12 Life	55 Univ. 37 Intra.	54 Eng. 21 Phy. Sci. 12 Math. 8 Environ.	67 Intra. 19 Ind.	67 Ind. 29 Intra.

Major characteristics of R&D obligations of Federal agencies, fiscal year 1971 (est.)—Continued

Agency and subdivision	Total R&D obligations (millions of dollars)	R&D obligations as percent of total agency budget[a]	Total research and development				Basic research		Applied research		Development
			Character of work (percent distribution)			Major performers[b] (percent of total)	Major fields of science[b] (percent of total)	Major performers[b] (percent of total)	Major fields of science[b] (percent of total)	Major performers[b] (percent of total)	Major performers[b] (percent of total)
			Basic research	Applied research	Development						
Department of the Air Force	3,024.6	—	3	19	79	76 Ind. 16 Intra.	34 Eng. 30 Phy. Sci. 26 Environ.	51 Intra. 38 Univ. 10 Ind.	92 Eng.	76 Ind. 17 Intra.	78 Ind. 15 Intra.
Defense Agencies	414.0	—	8	67	26	45 Ind. 31 Intra. 8 Univ.	35 Eng. 26 Math. 22 Phy. Sci. 13 Psych.	58 Univ. 31 Ind.	49 Eng. 18 Phy. Sci. 17 Environ. 9 Other	47 Ind. 29 Intra. 9 N.P. FFRDC	45 Ind. 43 Intra.
Departmentwide Funds	53.6	—	—	7	93	82 Ind. 10 Univ.	—	—	25 Eng. 17 Phy. Sci. 14 Other 13 Life 13 Soc. 10 Math. 8 Psych.	35 Ind. 24 N.P. 13 Univ. 12 Intra.	85 Ind. 10 Univ.
Department of Health, Education, and Welfare, total	1,479.9	2	31	62	8	52 Univ. 20 Intra. 14 N.P.	77 Life 8 Psych.	55 Univ. 30 Intra. 9 N.P.	78 Life 10 Soc.	52 Univ. 17 N.P. 16 Intra.	39 Univ. 21 N.P. FFRDC 15 N.P. 10 Intra. 9 Ind.
Food and Drug Administration	25.9	—	—	100	—	57 Intra. 30 Univ. 8 For.	—	—	62 Life 38 Phy. Sci.	57 Intra. 30 Univ. 8 For.	—
Health Services and Mental Health Administration	227.7	—	29	54	17	38 Univ. 24 Intra. 17 N.P. 8 Other	39 Life 30 Soc. 30 Psych.	49 Univ. 28 Intra. 16 N.P.	75 Life 13 Psych. 11 Soc.	30 Univ. 24 Intra. 18 N.P. 14 Other 13 For.	43 Univ. 21 Intra. 18 Ind. 17 N.P.
National Institutes of Health	1,038.5	—	36	63	1	58 Univ. 20 Intra. 14 N.P.	86 Life 8 Phy. Sci.	56 Univ. 31 Intra.	90 Life	60 Univ. 18 N.P. 13 Intra.	57 Univ. 25 Ind. 9 Intra.
Office of Child Development	5.5	—	—	36	64	64 Univ. 31 N.P.	—	—	50 Soc. 25 Life 25 Psych.	95 Univ.	49 N.P. 46 Univ.
Office of Education	133.2	—	9	42	49	37 Univ. 20 N.P. FFRDC 18 Other 14 N.P.	71 Soc. 29 Psych.	48 Univ. 20 N.P. 16 Univ. FFRDC 12 Other	89 Soc. 11 Psych.	38 Univ. 35 Other 13 N.P.	38 N.P. FFRDC 35 Univ. 12 N.P.
Social and Rehabilitation Service	35.6	—	—	91	9	44 Univ. 25 N.P. 16 Other	—	—	50 Soc. 40 Life 10 Psych.	46 Univ. 25 N.P. 15 Other 11 For.	26 N.P. 26 Univ. 24 Other 22 For.

								10 Math. 8 Psych.		
Department of Health, Education, and Welfare, total	1,479.9	2	31	62	8	52 Univ. 20 Intra. 14 N.P.	77 Life 8 Psych.	55 Univ. 30 Intra. 9 N.P.	78 Life 10 Soc.	52 Univ. 17 N.P. 16 Intra.	39 Univ. 21 N.P. FFRDC 15 N.P. 10 Intra. 9 Ind.
Food and Drug Administration	25.9	—	—	100	—	57 Intra. 30 Univ. 8 For.	—	—	62 Life 38 Phy. Sci.	57 Intra. 30 Univ. 8 For.	—
Health Services and Mental Health Administration	227.7	—	29	54	17	38 Univ. 24 Intra. 17 N.P. 8 Other	39 Life 30 Soc. 30 Psych.	49 Univ. 28 Intra. 16 N.P.	75 Life 13 Psych. 11 Soc.	30 Univ. 24 Intra. 18 N.P. 14 Other 13 For.	43 Univ. 21 Intra. 18 Ind. 17 N.P.
National Institutes of Health	1,038.5	—	36	63	1	58 Univ. 20 Intra. 14 N.P.	86 Life 8 Phy. Sci.	56 Univ. 31 Intra.	90 Life	60 Univ. 18 N.P. 13 Intra.	57 Univ. 25 Ind. 9 Intra.
Office of Child Development	5.5	—	—	36	64	64 Univ. 31 N.P.	—	—	50 Soc. 25 Life 25 Psych.	95 Univ.	49 N.P. 46 Univ.
Office of Education	133.2	—	9	42	49	37 Univ. 20 N.P. FFRDC 18 Other 14 N.P.	71 Soc. 29 Psych.	48 Univ. 20 N.P. 16 Univ. FFRDC 12 Other	89 Soc. 11 Psych.	38 Univ. 35 Other 13 N.P.	38 N.P. FFRDC 35 Univ. 12 N.P.
Social and Rehabilitation Service	35.6	—	—	91	9	44 Univ. 25 N.P. 16 Other 12 For.	—	—	50 Soc. 40 Life 10 Psych.	46 Univ. 25 N.P. 15 Other 11 For.	26 N.P. 26 Univ. 24 Other 22 For.
Social Security Administration	13.5	—	3	97	—	96 Intra.	100 Soc.	100 Intra.	100 Soc.	96 Intra.	—
Department of Housing and Urban Development	49.4	1	—	24	76	73 Ind. 12 Intra. 8 N.P.	—	—	100 Eng.	80 Ind. 15 N.P.	71 Ind. 16 Intra.
Department of the Interior, total	185.1	51	27	45	27	58 Intra. 20 Ind. 12 Univ.	57 Environ. 20 Life 15 Phy. Sci.	79 Intra. 10 Univ. 10 Other	51 Eng. 23 Environ. 16 Life	62 Intra. 20 Univ. 9 Ind.	58 Ind. 31 Intra.
Bonneville Power Administration	2.7	—	—	18	82	52 Intra. 34 Ind.	—	—	80 Eng. 10 Environ.	44 Ind. 29 Intra. 27 Univ.	57 Intra. 32 Ind. 8 For.
Bureau of Land Management	.8	—	—	97	3	55 Intra. 40 Univ.	—	—	92 Life 8 Soc.	54 Intra. 41 Univ.	100 Intra.
Bureau of Mines	58.0	—	11	54	34	75 Intra. 19 Ind.	62 Phy. Sci. 35 Eng.	85 Intra. 15 Univ.	80 Eng. 11 Phy. Sci.	91 Intra.	55 Ind. 45 Intra.
Bureau of Outdoor Recreation	.1	—	—	100	—	62 Intra. 38 Univ.	—	—	100 Soc.	62 Intra. 38 Univ.	—

Major characteristics of R&D obligations of Federal agencies, fiscal year 1971 (est.)—Continued

Agency and subdivision	Total R&D obligations (millions of dollars)	R&D obligations as percent of total agency budget[a]	Total research and development				Basic research		Applied research		Development
			Character of work (percent distribution)			Major performers[b] (percent of total)	Major fields of science[b] (percent of total)	Major performers[b] (percent of total)	Major fields of science[b] (percent of total)	Major performers[b] (percent of total)	Major performers (percent of total)
			Basic research	Applied research	Development						
Bureau of Reclamation	9.1	—	(e)	98	1	40 Univ. 38 Intra. 16 Ind.	73 Eng. 27 Life	55 Intra. 39 Univ.	73 Environ. 26 Eng.	40 Univ. 38 Intra. 16 Ind.	100 Intra.
Bureau of Sport Fisheries and Wildlife	22.2	—	43	48	9	58 Intra. 40 Other	100 Life	52 Other 43 Intra.	100 Life	62 Intra. 37 Other	100 Intra.
Geological Survey	43.2	—	70	30	—	96 Intra.	91 Environ.	99 Intra.	70 Environ. 16 Phy. Sci. 11 Eng.	90 Intra.	—
Office of Coal Research	12.4	—	—	39	61	45 Ind. 33 N.P. 20 Univ.	—	—	100 Eng.	41 Ind. 31 N.P. 26 Univ.	48 Ind. 34 N.P. 16 Univ.
Office of Saline Water	23.4	—	7	15	79	68 Ind. 15 Intra. 10 Univ.	100 Phy. Sci.	99 Univ.	100 Eng.	56 Ind. 15 Univ. 12 Ind. FFRDC 12 N.P.	76 Ind. 18 Intra.
Office of the Secretary	.8	—	—	73	27	75 Ind. 19 Univ.	—	—	100 Eng.	69 Ind. 26 Univ.	94 Ind.
Office of Water Resources Research	12.4	—	21	79	—	79 Univ. 8 Ind.	38 Environ. 19 Eng. 18 Life 14 Soc.	78 Univ. 8 Ind.	46 Eng. 19 Life 15 Environ. 11 Soc.	79 Univ. 8 Ind.	—
Department of Justice, total	10.1	1	—	62	38	32 Other 27 Ind. 19 Univ. 10 Intra. 9 N.P.	—	—	46 Soc. 19 Psych. 13 Life 12 Phy. Sci.	34 Other 29 Univ. 20 Ind. 8 N.P.	39 Ind. 30 Other 19 Intra. 10 N.P.
Bureau of Narcotics and Dangerous Drugs	1.6	—	—	100	—	33 N.P. 27 Univ. 27 Ind. 10 N.P	—	—	50 Life 47 Soc.	33 N.P. 27 Univ. 27 Ind. 10 N	—

Geological Survey	43.2	—	70	30	—	96 Intra.	91 Environ.	99 Intra.	70 Environ. 16 Phy. Sci. 11 Eng.	90 Intra.	—
Office of Coal Research	12.4	—	—	39	61	45 Ind. 33 N.P. 20 Univ.	—	—	100 Eng.	41 Ind. 31 N.P. 26 Univ.	48 Ind. 34 N.P. 16 Univ.
Office of Saline Water	23.4	—	7	15	79	68 Ind. 15 Intra. 10 Univ.	100 Phy. Sci.	99 Univ.	100 Eng.	56 Ind. 15 Univ. 12 Ind. FFRDC 12 N.P.	76 Ind. 18 Intra.
Office of the Secretary	.8	—	—	73	27	75 Ind. 19 Univ.	—	—	100 Eng.	69 Ind. 26 Univ.	94 Ind.
Office of Water Resources Research	12.4	—	21	79	—	79 Univ. 8 Ind.	38 Environ. 19 Eng. 18 Life 14 Soc.	78 Univ. 8 Ind.	46 Eng. 19 Life 15 Environ. 11 Soc.	79 Univ. 8 Ind.	—
Department of Justice, total	10.1	1	—	62	38	32 Other 27 Ind. 19 Univ. 10 Intra. 9 N.P.	—	—	46 Soc. 19 Psych. 13 Life 12 Phy. Sci.	34 Other 29 Univ. 20 Ind. 8 N.P.	39 Ind. 30 Other 19 Intra. 10 N.P.
Bureau of Narcotics and Dangerous Drugs	1.6	—	—	100	—	33 N.P. 27 Univ. 27 Ind. 10 N.P. FFRDC	—	—	50 Life 47 Soc.	33 N.P. 27 Univ. 27 Ind. 10 N.P. FFRDC	—
Bureau of Prisons	.2	—	—	—	100	70 Intra. 18 Other 10 N.P.	—	—	—	—	70 Intra. 18 Other 10 N.P.
Federal Bureau of Investigation	.8	—	—	—	100	86 Ind. 14 Intra.	—	—	—	—	86 Ind. 14 Intra.
Law Enforcement Assistance Administration	7.5	—	—	62	38	43 Other 22 Ind. 20 Univ. 10 Intra.	—	—	46 Soc. 25 Psych. 15 Phy. Sci. 8 Eng.	46 Other 30 Univ. 18 Ind.	9 Other 28 Ind. 16 Intra. 13 N.P.
Department of Labor, total	24.5	1	11	41	49	44 Intra. 21 N.P. 18 Univ. 10 Other	100 Soc.	88 Intra.	100 Soc.	51 Intra. 18 N.P. 16 Univ. 9 Other	29 Intra. 26 N.P. 23 Univ. 13 Other 9 Ind.
Bureau of Labor Statistics	3.8	—	39	31	31	100 Intra.	100 Soc.	100 Intra.	100 Soc.	100 Intra.	100 Intra.
Labor-Management Services Administration	.7	—	100	—	—	100 Intra.	100 Soc.	100 Intra.	—	—	—
Manpower Administration	17.4	—	2	36	62	29 N.P. 25 Univ. 22 Intra. 14 Other 10 Ind.	100 Soc.	29 N.P. 25 Univ. 22 Intra. 14 Other 10 Ind.	100 Soc.	29 N.P. 25 Univ. 22 Intra. 14 Other 10 Ind.	29 N.P. 25 Univ. 22 Intra. 14 Other 10 Ind.
Workplace Standards Administration	2.6	—	—	100	—	100 Intra.	—	—	100 Soc.	100 Intra.	—
Postal Service	45.1	2	—	12	88	82 Ind. 16 Intra.	—	—	100 Other	58 Ind. 30 Intra.	85 Ind. 15 Intra.

Major characteristics of R&D obligations of Federal agencies, fiscal year 1971 (est.)—Continued

Agency and subdivision	Total R&D obligations (millions of dollars)	R&D obligations as percent of total agency budget[a]	Total research and development				Basic research		Applied research		Development
			Character of work (percent distribution)			Major performers[b] (percent of total)	Major fields of science[b] (percent of total)	Major performers[b] (percent of total)	Major fields of science[b] (percent of total)	Major performers[b] (percent of total)	Major performers[b] (percent of total)
			Basic research	Applied research	Development						
Department of State, total	40.5	3	—	63	37	43 Univ. 28 N.P. 14 Intra. 13 For.	—	—	74 Life 21 Soc.	48 Univ. 23 N.P. 18 Intra. 10 For.	38 N.P. 34 Univ. 19 For. 8 Intra.
Departmental Funds	.4	—	—	100	—	47 Other 31 Intra. 12 N.P. 10 Univ.	—	—	100 Soc.	47 Other 31 Intra. 12 N.P. 10 Univ.	—
Agency for International Development	40.0	—	—	62	38	43 Univ. 28 N.P. 14 Intra. 13 For.	—	—	75 Life 20 Soc.	49 Univ. 23 N.P. 18 Intra. 10 For.	38 N.P. 34 Univ. 19 For. 8 Intra.
Peace Corps	.1	—	—	100	—	58 Ind. 30 Intra. 12 N.P.	—	—	100 Psych.	58 Ind. 30 Intra. 12 N.P.	—
Department of Transportation, total	436.7	6	5	21	75	71 Ind. 19 Intra.	56 Environ. 38 Eng.	61 Intra. 16 Other 10 Univ. 9 Ind.	75 Eng. 12 Soc.	36 Intra. 34 Ind. 16 Other 8 Univ.	85 Ind. 12 Intra.
Federal Aviation Agency	79.0	—	—	29	71	57 Intra. 37 Ind.	—	—	85 Eng.	82 Intra. 15 Ind.	47 Ind. 46 Intra.
Federal Highway Administration	32.3	—	20	65	15	64 Other 15 Intra. 11 Ind.	95 Eng.	52 Other 17 Intra. 12 Ind. 9 Univ. 9 N.P.	95 Eng.	65 Other 14 Ind. 13 Intra. 8 N.P.	77 Other 23 Intra.
Federal Railroad Administration	19.7	—	—	50	50	78 Ind. 12 Intra.	—	—	61 Eng. 34 Soc.	70 Ind. 19 Intra.	86 Ind.
National Highway Traffic Safety Administration	16.7	—	7	72	22	48 Ind. 18 Intra. 18 Univ. 14 N.P.	100 Eng.	100 Ind.	65 Eng. 17 Psych. 10 Life	28 Ind. 25 Intra. 25 Univ. 20 N.P.	100 Ind.
Office of the Secretary	249.1	—	—	6	94	97 Ind.	—	—	64 Eng. 31 Soc.	83 Ind. 14 Intra.	98 Ind.
U. S. Coast Guard	25.6	—	45	17	38	61 Intra. 35 Ind.	100 Environ.	100 Intra.	60 Environ. 38 Eng.	68 Intra. 20 Ind. 9 N.P.	82 Ind. 12 Intra.
Urban Mass Transportation Administration	14.3	—	11	31	58	43 Intra. 30 Univ.	49 Soc. 43 Eng.	100 Univ.	62 Eng. 29 Soc.	53 Univ. 17 Intra.	65 Intra. 17 Ind.

						13 For.				
Peace Corps	.1	—	—	100	—	58 Ind. 30 Intra. 12 N.P.	—	—	100 Psych.	58 Ind. 30 Intra. 12 N.P.	—
Department of Transportation, total	436.7	6	5	21	75	71 Ind. 19 Intra.	56 Environ. 38 Eng.	61 Intra. 16 Other 10 Univ. 9 Ind.	75 Eng. 12 Soc.	36 Intra. 34 Ind. 16 Other 8 Univ.	85 Ind. 12 Intra.
Federal Aviation Agency	79.0	—	—	29	71	57 Intra. 37 Ind.	—	—	85 Eng.	82 Intra. 15 Ind.	47 Ind. 46 Intra.
Federal Highway Administration	32.3	—	20	65	15	64 Other 15 Intra. 11 Ind.	95 Eng.	52 Other 17 Intra. 12 Ind. 9 Univ. 9 N.P.	95 Eng.	65 Other 14 Ind. 13 Intra. 8 N.P.	77 Other 23 Intra.
Federal Railroad Administration	19.7	—	—	50	50	78 Ind. 12 Intra.	—	—	61 Eng. 34 Soc.	70 Ind. 19 Intra.	86 Ind.
National Highway Traffic Safety Administration	16.7	—	7	72	22	48 Ind. 18 Intra. 18 Univ. 14 N.P.	100 Eng.	100 Ind.	65 Eng. 17 Psych. 10 Life	28 Ind. 25 Intra. 25 Univ. 20 N.P.	100 Ind.
Office of the Secretary	249.1	—	—	6	94	97 Ind.	—	—	64 Eng. 31 Soc.	83 Ind. 14 Intra.	98 Ind.
U. S. Coast Guard	25.6	—	45	17	38	61 Intra. 35 Ind.	100 Environ.	100 Intra.	60 Environ. 38 Eng.	68 Intra. 20 Ind. 9 N.P.	82 Ind. 12 Intra.
Urban Mass Transportation Administration	14.3	—	11	31	58	43 Intra. 30 Univ. 14 Ind. 11 N.P.	49 Soc. 43 Eng.	100 Univ.	62 Eng. 29 Soc.	53 Univ. 17 Intra. 13 Ind. 12 N.P.	65 Intra. 17 Ind. 12 N.P.
Department of the Treasury, total	.9	(c)	—	39	61	100 Intra.	—	—	95 Phy. Sci.	100 Intra.	100 Intra.
Bureau of Engraving and Printing	.9	—	—	39	61	100 Intra.	—	—	95 Phy. Sci.	100 Intra.	100 Intra.
Other agencies											
Advisory Commission on Intergovernmental Relations	.5	(d)	—	100	—	100 Intra.	—	—	100 Soc.	100 Intra.	—
Atomic Energy Commission	1,306.6	51	21	11	68	36 Ind. FFRDC 33 Univ. FFRDC 21 Ind.	81 Phy. Sci. 13 Life	61 Univ. FFRDC 27 Univ. 10 Ind. FFRDC	47 Phy. Sci. 30 Life 17 Eng.	49 Univ. FFRDC 26 Ind. FFRDC 11 Univ.	45 Ind. FFRDC 30 Ind. 22 Univ. FFRDC
Civil Aeronautics Board	.3	1	—	100	—	100 Intra.	—	—	100 Soc.	100 Intra.	—
Civil Service Commission	.5	(c)	21	44	34	100 Intra.	100 Psych.	100 Intra.	100 Psych.	100 Intra.	100 Intra.
Environmental Protection Agency	116.2	8	5	48	47	38 Ind. 33 Intra. 15 Univ.	47 Life 41 Phy. Sci. 10 Environ.	76 Univ. 13 N.P. 10 For.	43 Eng. 34 Life 13 Phy. Sci. 9 Environ.	35 Intra. 30 Ind. 19 Univ. 9 N.P.	50 Ind. 33 Intra.

Major characteristics of R&D obligations of Federal agencies, fiscal year 1971 (est.)—Continued

Agency and subdivision	Total R&D obligations (millions of dollars)	R&D obligations as percent of total agency budget[a]	Total research and development				Basic research		Applied research		Development
			Character of work (percent distribution)			Major performers[b] (percent of total)	Major fields of science[b] (percent of total)	Major performers[b] (percent of total)	Major fields of science[b] (percent of total)	Major performers[b] (percent of total)	Major performers[b] (percent of total)
			Basic research	Applied research	Development						
Federal Communications Commission	.6	2	—	100	—	100 Intra.	—	—	100 Eng.	100 Intra.	—
Federal Home Loan Bank Board	.4	(d)	—	100	—	100 Intra.	—	—	100 Soc.	100 Intra.	—
Federal Trade Commission	.5	2	—	100	—	100 Intra.	—	—	100 Soc.	100 Intra.	—
General Services Administration	.3	(c)	—	33	67	60 Other 29 Intra.	—	—	76 Eng. 24 Other	78 Intra. 22 N.P.	89 Other
Library of Congress	2.5	(d)	—	40	60	100 Intra.	—	—	100 Other	100 Intra.	100 Intra.
National Aeronautics and Space Administration	3,247.7	92	19	26	55	63 Ind. 28 Intra.	45 Phy. Sci. 30 Environ. 18 Eng.	46 Ind. 32 Intra. 13 Univ. FFRDC 8 Univ.	77 Eng. 15 Environ.	53 Intra. 36 Ind.	82 Ind. 14 Intra.
National Science Foundation	345.0	70	83	12	5	75 Univ. 9 Univ. FFRDC	28 Phy. Sci. 22 Environ. 21 Life 9 Eng.	76 Univ. 11 Univ. FFRDC	26 Soc. 19 Eng. 19 Environ. 15 Other 15 Soc.	80 Univ.	43 N.P. 39 Univ. 17 Intra.
Office of Economic Opportunity	115.6	6	2	32	66	62 N.P. 19 Univ. 11 Ind.	100 Soc.	60 Univ. 40 Intra.	68 Soc. 19 Life 14 Psych.	36 Univ. 29 Ind. 20 N.P. 14 Intra.	85 N.P. 10 Univ.
Office of Emergency Preparedness	1.0	(d)	—	100	—	67 Intra. 25 Ind. 8 N.P.	—	—	50 Eng. 50 Other	67 Intra. 25 Ind. 8 N.P.	—
Office of Science and Technology	2.0	100	20	30	50	100 Intra.	31 Life 30 Eng. 26 Phy. Sci. 9 Environ.	100 Intra.	31 Life 30 Eng. 26 Phy. Sci. 9 Environ.	100 Intra.	100 Intra.
Smithsonian Institution	20.3	40	100	—	—	93 Intra.	42 Life 37 Soc. 17 Phy. Sci.	93 Intra.	—	—	—
Tennessee Valley Authority	9.3	2	—	80	20	98 Intra.	—	—	55 Eng.	98 Intra.	100 Intra.

National Aeronautics and Space Administration	3,247.7	92	19	26	55	63 Ind. 28 Intra.	45 Phy. Sci. 30 Environ. 18 Eng.	46 Ind. 32 Intra. 13 Univ. FFRDC 8 Univ.	77 Eng. 15 Environ.	53 Intra. 36 Ind.	82 Ind. 14 Intra.
National Science Foundation	345.0	70	83	12	5	75 Univ. 9 Univ. FFRDC	28 Phy. Sci. 22 Environ. 21 Life 9 Eng.	76 Univ. 11 Univ. FFRDC	26 Soc. 19 Eng. 19 Environ. 15 Other 15 Soc.	80 Univ.	43 N.P. 39 Univ. 17 Intra.
Office of Economic Opportunity	115.6	6	2	32	66	62 N.P. 19 Univ. 11 Ind.	100 Soc.	60 Univ. 40 Intra.	68 Soc. 19 Life 14 Psych.	36 Univ. 29 Ind. 20 N.P. 14 Intra.	85 N.P. 10 Univ.
Office of Emergency Preparedness	1.0	(d)	—	100	—	67 Intra. 25 Ind. 8 N.P.	—	—	50 Eng. 50 Other	67 Intra. 25 Ind. 8 N.P.	—
Office of Science and Technology	2.0	100	20	30	50	100 Intra.	31 Life 30 Eng. 26 Phy. Sci. 9 Environ.	100 Intra.	31 Life 30 Eng. 26 Phy. Sci. 9 Environ.	100 Intra.	100 Intra.
Smithsonian Institution	20.3	40	100	—	—	93 Intra.	42 Life 37 Soc. 17 Phy. Sci.	93 Intra.	—	—	—
Tennessee Valley Authority	9.3	2	—	80	20	98 Intra.	—	—	55 Eng. 26 Life 13 Phy. Sci.	98 Intra.	100 Intra.
U. S. Arms Control and Disarmament Agency	3.1	34	—	76	24	65 Intra. 15 Ind. 13 N.P.	—	—	56 Eng. 25 Soc. 10 Phy. Sci.	57 Intra. 17 Ind. 17 N.P.	90 Intra. 10 Ind.
U. S. Information Agency	.2	(c)	—	86	14	68 Intra. 32 Ind.	—	—	100 Eng.	63 Intra. 38 Ind.	100 Intra.
Veterans Administration	61.6	1	9	90	1	97 Intra.	84 Life 11 Psych.	98 Intra.	91 Life	98 Intra.	32 Ind. 30 Intra. 28 Univ. 10 N.P.

[a] Total agency budgets are derived from table 8, "Obligations Incurred, Net" of **The Budget, FY 1972**, page 528.
[b] "Major" is here defined as any performer or field of science which singly accounts for at least 8 percent of total funds.
[c] Less than 0.5 percent.
[d] Comparable data for total agency budget not available.
NOTE: Intramural activities cover costs associated with the administration of intramural and extramural programs by Federal personnel as well as actual intramural performance.

ABBREVIATIONS

Performers

Intra.—Intramural.
Ind.—Industrial firms excluding Federally Funded Research and Development Centers (FFRDC's).
Ind. FFRDC—FFRDC's administered by industrial firms.
Univ.—Universities and colleges excluding FFRDC's.
Univ. FFRDC—FFRDC's administered by universities and colleges.
N.P.—Other nonprofit institutions excluding FFRDC's.
N.P. FFRDC—FFRDC's administered by other nonprofit institutions.
For.—Foreign.

Field of Sciences

Life—Life sciences.
Psych.—Psychology.
Phy. Sci.—Physical sciences.
Environ.—Environmental sciences.
Math.—Mathematics.
Eng.—Engineering.
Soc.—Social sciences.

SECTION 7.

r&d plant

The rapid advances of science have been possible because of the availability of large-scale research facilities and complex equipment and instruments. Support for R&D plant is, therefore, a corallary of support for research and development and is necessary for the continued progress of science.

R&D plant includes both land and capital goods used in research and development. Fixed equipment such as radio telescopes, nuclear reactors, and research vessels are also R&D plant, but expendable items like rocket fuel, experimental rockets, and common laboratory supplies are not. R&D plant covers acquisition, construction, and repair, but not operational costs.

R&D plant data reported here tend to be understated because of the difficulty some agencies, such as DOD and NASA, have in reporting this information. (See technical notes, p. 68.)

THE CURRENT PERIOD

The following agencies provided the largest amount of R&D plant support during the 1969–72 period:

Federal obligations for R&D plant, by agency

[Dollars in millions]

Agency	Actual		Estimates	
	1969	1970	1971	1972
Total	$669	$524	$659	$588
Atomic Energy Commission	303	266	353	243
Department of Defense	194	141	162	160
National Aeronautics and Space Administration	55	33	25	56
Department of Health, Education, and Welfare	53	31	24	23
National Science Foundation	27	23	22	19
Department of Transportation	6	5	19	43
Other agencies	31	25	54	44

- Since 1967 total R&D plant funding has fluctuated between $500 million and $700 million.
- The $524 million obligated in 1970 was the lowest figure for R&D plant since 1959.
- Support by most agencies for R&D plant is declining or leveling off. The chief exception is DOT, whose facility programs are scheduled to increase substantially, primarily through construction on the part of the Federal Railroad Administration at its High-Speed Ground Test Center in Pueblo, Colo.
- For AEC the drop in R&D plant obligations in 1970 resulted from delays in initiation of construction and slippages in scheduling of ongoing projects, primarily in the reactor development, weapons, and physical research programs. The estimated increase in 1971 was largely compensation for the 1970 delays.
- For DOD the drop in R&D plant support in FY 1970 was largely due to a reduction in Air Force construction activity. The Air Force, how-

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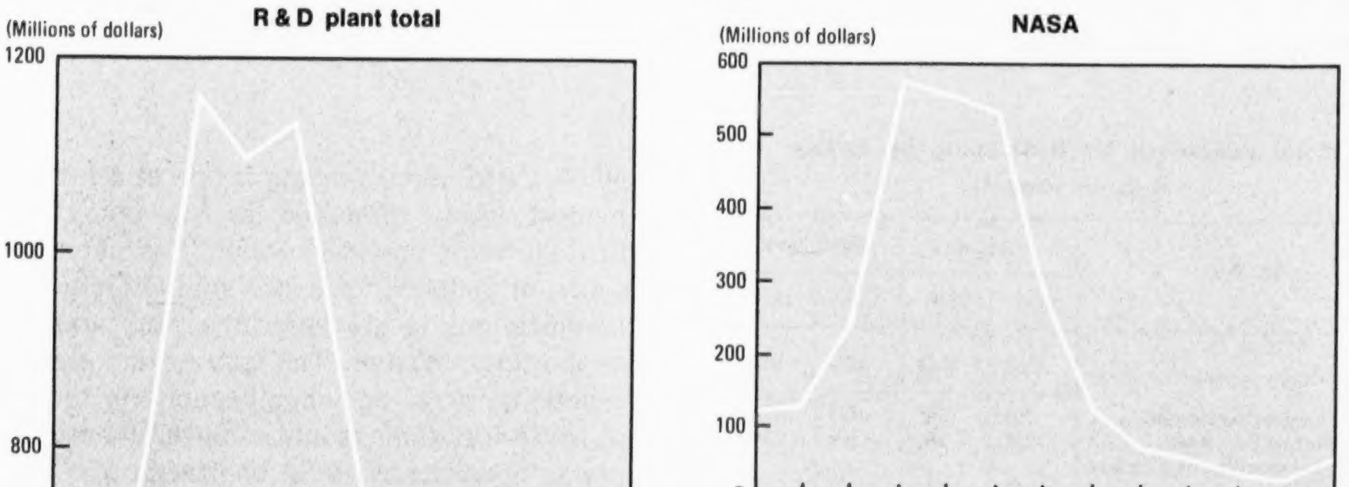
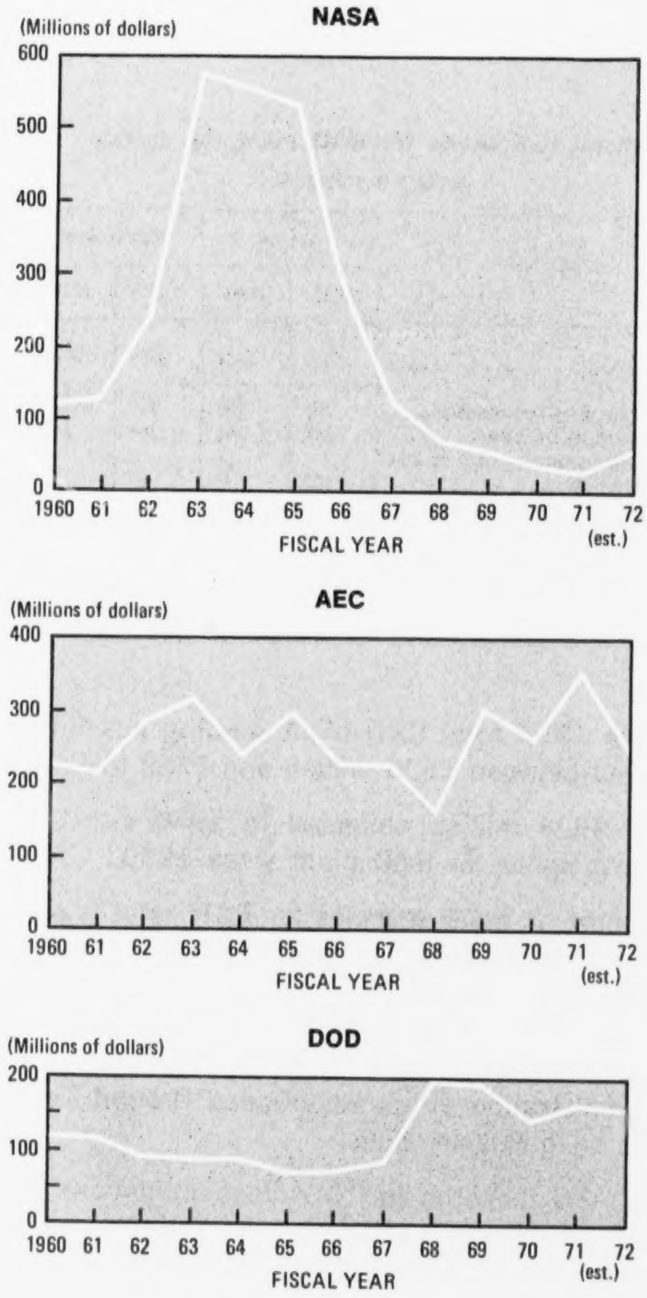
- For DOD the drop in R&D plant support in FY 1970 was largely due to a reduction in Air Force construction activity. The Air Force, however, remains the primary supporter of R&D facilities among all DOD subdivisions throughout the current period.
- NASA's R&D plant funding is now at a relatively modest level, compared to the mid-1960's. Current funds provide for modification and provision of facilities for space shuttle technology, modifications to the Titan III launch area, and supporting activities. The last include essential rehabilitation of and modifications to facilities at NASA installations and at Government-owned plants operated by NASA contractors.
- The drop in HEW obligations in the current period is largely the result of the completion in 1970 of Office of Education construction activity for R&D centers and educational laboratories. Most of the remaining HEW program represents NIH support for the construction of research facilities at universities or for its own intramural work.
- The NSF level of R&D plant support continues to drop, mostly because of the overall decrease in funding for institutional support, which includes facilities.

Trends in Federal obligations for R&D plant, by agency



SOURCE: National Science Foundation

, by agency



TRENDS

- The R&D plant constructed in any given year supports R&D performance over a number of years. Thus, peaks and valleys in R&D plant funding are not closely indicative of the level of the R&D effort of the same period.

- Throughout the 1960–72 timespan, with few exceptions, three agencies have been the major sources of R&D plant funds—AEC, DOD, and NASA; their combined totals have ranged from 68 to 87 percent of the Federal R&D plant total.

- Since 1963, when R&D plant obligations were at their highest point, obligations have dropped 44 percent (based on 1971). Almost all the R&D plant support agencies have contributed to the decline.

- However, during the 1960's the broad trends in R&D plant obligations—the rise and subsequent decrease—mainly reflected the impact of one agency, NASA. The total of $1,168 million in 1963 included NASA obligations of $577 million, almost as much as all other agencies combined. NASA's R&D plant obligations by then had risen to 5 times their 1960 level, but they declined rapidly after the mid-1960's. The other agencies together maintained a $400 million to $600 million level throughout the decade.

- Since 1960, AEC's R&D plant obligations have been at the $200 million to $300 million level in most years. The high for this agency is represented by the $353 million estimate for 1971. AEC's R&D plant funds have been used primarily for the construction of national research centers, such as the Argonne and Brookhaven National Laboratories, and for facilities and capital equipment for the Reactor Development, Physical Research, Weapons Research, and Special Nuclear Materials programs. Recently, AEC has initiated such major efforts as the Fast Flux Testing Facility near Richland, Wash., and the 200-BeV Accelerator at Weston, Ill.

- Most of the R&D plant obligations of DOD have been used for activities connected with missile and rocket programs. These include the construction of a continental air defense network and the establishment of facilities to test missile, propulsion, and electronics systems.

- The sharp rise and drop in NASA's R&D plant obligations in the 1960's chiefly reflect the requirements of the manned lunar landing program. From a level above $500 million between 1963 and 1965, NASA's funding for R&D plant has dropped to the $25 million estimated for 1971. Planned facilities include those for launching space vehicles; simulating a space environment; testing, tracking, and data acquisition; and control and guidance.

TYPE OF PERFORMER SUPPORTED

A measure of R&D plant purposes can be shown in terms of type of performer supported.

Federal obligations for R&D plant, by type of performer supported

[Dollars in millions]

Type of performer supported	Actual		Estimates	
	1969	1970	1971	1972
Total	$669	$524	$659	$588
	Percent distribution			
Federal intramural	39	32	36	49
Industrial firms	8	8	11	9
FFRDC's administered by industrial firms	13	12	19	13
Universities and colleges	9	11	7	6
FFRDC's administered by universities	26	32	27	23
Other nonprofit institutions	1	1	1	1
FFRDC's administered by other nonprofit institutions	3	5	(a)	(a)
Other domestic performers	(a)	(a)	(a)	(a)

[a] Less than 0.5 percent.

- From 1969 to 1972 the two major types of performers supported by R&D plant construction—intramural performers and FFRDC's administered by universities—reflect different trends in their share of the R&D plant total.

- R&D plant funds supporting Federal intramural performance are scheduled to rise substantially between 1970 and 1972 in their share of the total whereas R&D plant funds for performance by university-administered FFRDC's are expected to drop in their share of the total. By 1972 the first sector is expected to make up about one-half the total and the second, about one-fourth. R&D plant support to industry-administered FFRDC's is scheduled to be about one-eighth of the total.

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- DOD remains the largest agency provider of R&D plant funds for intramural research and development, but NASA and DOT are the agencies responsible for most of the scheduled increase in 1972.

- AEC provided virtually all of the R&D plant funds for work performed by university-administered FFRDC's. Funds were to be used for such installations as the National Accelerator Laboratory near Chicago, Ill., the Los Alamos Scientific Laboratory in Los Alamos, N. Mex., and the Lawrence Radiation Laboratory in Livermore, Calif.

- AEC also provided all of the R&D plant funds used to support work performed by industry-administered FFRDC's. Included in this category are the Pacific Northwest Laboratory in Richland, Wash. and the Sandia Laboratories in Albuquerque, N. Mex. and Livermore, Calif.

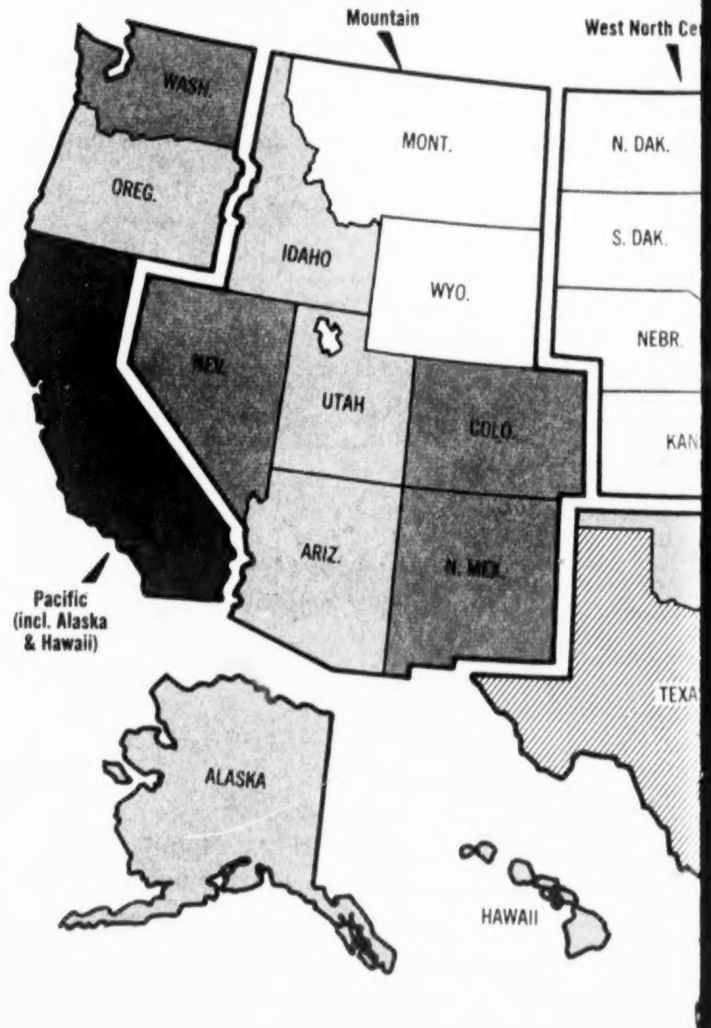
(For detailed data on this section see appendix tables C-70 through C-73, C-94, and C-97.)

SECTION 8.

geographic distribution

Early surveys on the distribution of Federal R&D obligations to States were conducted intermittently. The first ones covered 1963 and 1965. Later surveys were conducted on an annual basis, beginning with the year 1968. The current one, covering 1970, is the fifth survey of this kind. All of the surveys have been based on reports by agencies whose combined obligations represented almost all of the total Federal R&D dollars. The 10 respondents for 1970 had total obligations of $15.0 billion, or 98 percent of total agency R&D obligations for that year. Their R&D plant obligations were $520 million. Data are given on a prime contract basis, although a sample survey was made of the effects of first-tier subcontracting in 1970. Indications are that dispersion of funds is actually greater than the pattern shown here if subcontracting is taken into account, as discussed later in the section.

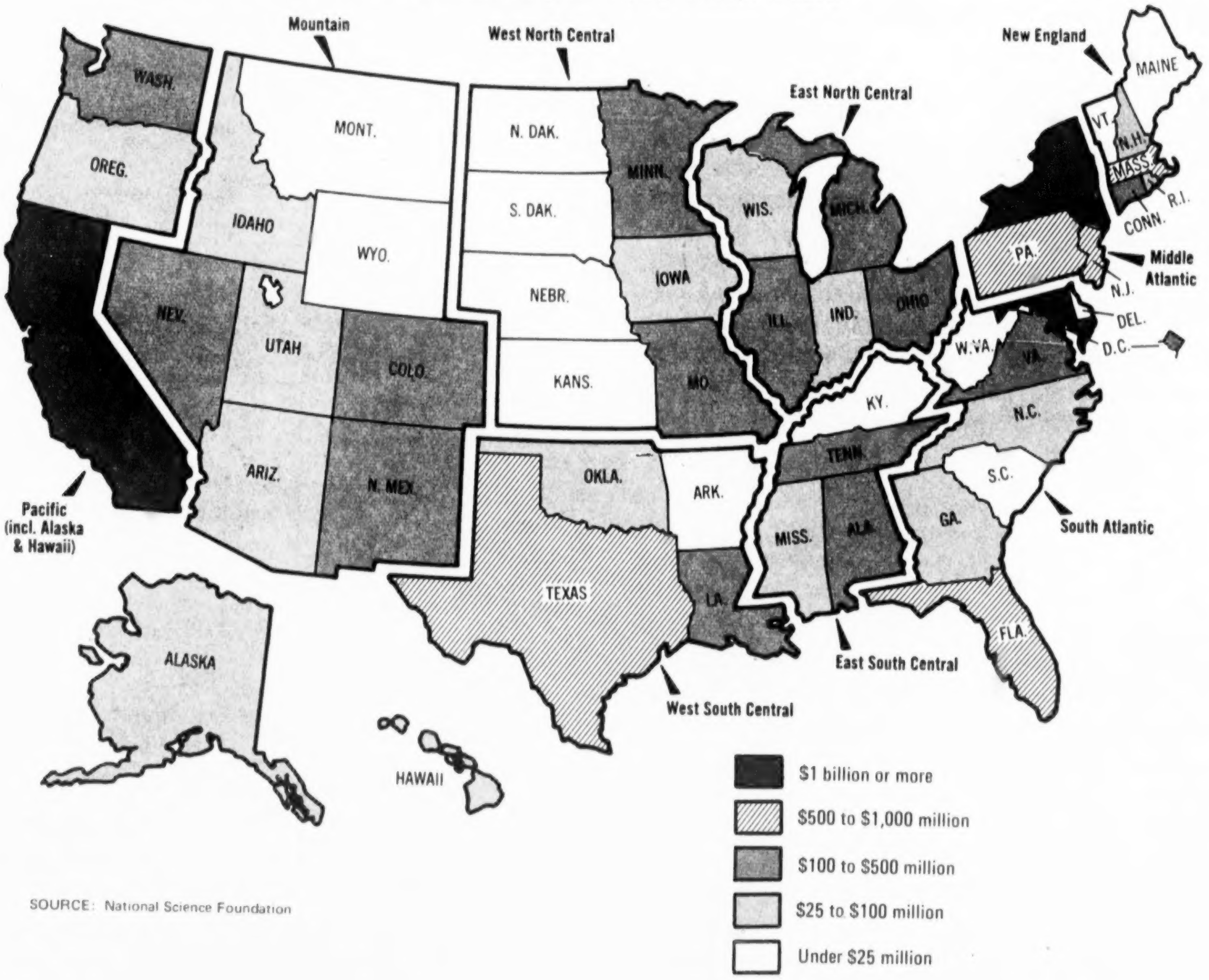
Distribution of total Federal R&D obligati



SOURCE: National Science Foundation

- In 1970, for the first time, as many as three States received more than $1 billion each in Federal R&D support. They were California, New York, and Maryland.
- However, the California total was almost $3.9 billion, more than three times the amount received by the next State, New York.
- Five States fell in the $500 million-to-$1 billion category: Florida, Massachusetts, New Jersey, Texas, and Pennsylvania.

Distribution of total Federal R&D obligations, by State, FY 1970


Mountain
West North Central
New England
East North Central
Middle Atlantic
South Atlantic
East South Central
West South Central
Pacific (incl. Alaska & Hawaii)
WASH.
OREG.
IDAHO
MONT.
WYO.
NEV.
UTAH
COLO.
ARIZ.
N. MEX.
N. DAK.
S. DAK.
NEBR.
KANS.
MINN.
IOWA
MO.
WIS.
MICH.
ILL.
IND.
OHIO
KY.
TENN.
MISS.
ALA.
OKLA.
ARK.
TEXAS
LA.
W.VA.
VA.
N.C.
S.C.
GA.
FLA.
PA.
N.J.
DEL.
D.C.
MAINE
VT.
N.H.
MASS.
R.I.
CONN.
ALASKA
HAWAII
$1 billion or more
$500 to $1,000 million
$100 to $500 million
$25 to $100 million
Under $25 million

SOURCE: National Science Foundation

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- However, the California total was almost $3.9 billion, more than three times the amount received by the next State, New York.
- Five States fell in the $500 million-to-$1 billion category: Florida, Massachusetts, New Jersey, Texas, and Pennsylvania.
- Fifteen States (including the District of Columbia) were found in the $100 million-to-$500 million group, and this group was widely distributed throughout the country.
- Fifteen States received from $25 million to $100 million in support.
- Thirteen States received less than $25 million.

DISTRIBUTION BY DIVISION

In the 1963–70 period the distribution of Federal R&D obligations among national divisions has changed as follows:

Distribution of Federal R&D obligations by geographic division, fiscal years 1963, 1965, 1968, 1969, and 1970

Division	1963	1965	1968	1969	1970
Total (millions of dollars)	$12,251	$14,357	$15,690	$15,355	$14,981
	Percent distribution				
Pacific	38.1	33.8	30.4	31.3	29.4
South Atlantic	13.8	15.0	18.0	19.3	19.4
Middle Atlantic	14.6	15.5	15.7	15.9	16.8
Mountain	8.7	6.9	7.0	7.4	7.6
East North Central	6.7	6.4	8.2	6.8	6.9
New England	5.7	6.9	6.4	7.1	6.7
West South Central	5.0	8.0	7.6	5.8	5.6
East South Central	3.4	4.4	4.2	3.9	4.0
West North Central	3.1	2.8	2.0	2.1	3.2

NOTE: Percents do not add to 100 because outlying areas have been excluded.

- From 1969 to 1970 six divisions grew in their share of the total, and three declined.
- The only significant gains were registered by the Middle Atlantic division, which has shown steady growth in its share since 1963, and the West North Central division, which had previously been declining.
- The greatest decline from 1969 to 1970 was shown by the Pacific division. However, this division remained the largest recipient of Federal R&D funds by a wide margin.
- Over the longer span, from 1963 to 1970, the Pacific division registered the greatest decline in share of the R&D total. The largest increase by far, both in share and in dollars, was reflected by the South Atlantic division. The second largest dollar gain was made by the Middle Atlantic division and the third largest dollar gain, by the New England division. Their shares of the R&D total increased accordingly.
- The divisions showing the greatest relative increases from 1963 to 1970 were the South Atlantic, the East South Central, the New England and the Middle Atlantic. The only division to reflect a loss from 1963 to 1970 was the Pacific division.

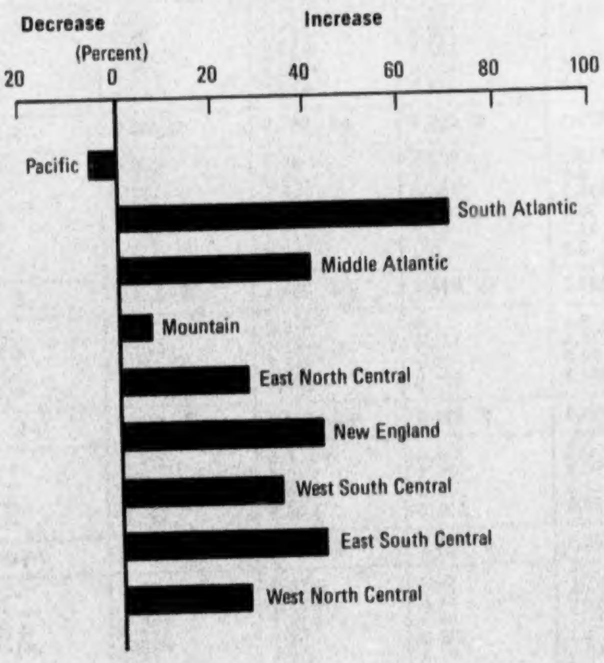
STATES WITHIN DIVISIONS

Important changes by States in 1970 and their effects on the divisions are shown below:

Pacific

- The relatively large decrease in Federal support to the Pacific division from 1969 to 1970 was the net result of losses to three States that were not offset by the gains of the other two. California's decrease of $419 million was by

Change in Federal R&D funding support to geographic divisions, FY 1963-1970



SOURCE: National Science Foundation

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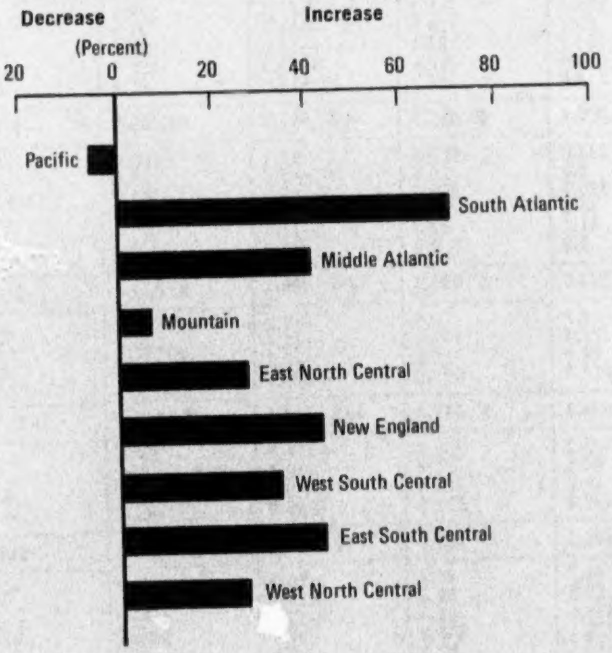
- The chief gain was shown by Washington. In 1970 DOT funding for the supersonic aircraft more than offset a DOD funding decrease, largely on the part of the Air Force.

Change in Federal R&D funding support to geographic divisions, FY 1963-1970



SOURCE: National Science Foundation

South Atlantic

- This division's net dollar decline from 1969 to 1970 was almost all a reflection of the drop of $205 million in Federal R&D support to Georgia, which was second only to California in dollar loss in 1970. The only other State in this division to show a decrease was Florida.
- Georgia's decrease was based on a decline in industrial work on the C–5A aircraft for the Air Force.
- On the other hand, Maryland's $102 million increase was surpassed by only two other States in 1970 (Missouri and New York). Almost all the reporting agencies expanded their support, especially DOD, NASA, and HEW.
- Virginia gained mainly through further funding on the part of DOD and NASA; both agencies concentrated on the intramural sector.

Middle Atlantic

- Increased support to New York and New Jersey more than offset Pennsylvania's rather substantial loss in 1970. The New York increase of $129 million largely represented additional industrial performance of R&D work on the Navy's F–14A fleet air defense fighter-interceptor.
- The drop in support to Pennsylvania (third largest drop among all States in 1970) came about mostly because of reduced DOD and NASA contracting to industry.

R&D obligations by geographic division and State, fiscal years 1963, 1965, 1968, 1969, and 1970

[Dollars in millions]

Division and State	1963	1965	1968	1969	Net increase/ decrease 1963–69	1970	Net increase/ decrease 1969–70
Pacific	**$4,665.2**	**$4,849.0**	**$4,774.3**	**$4,813.5**	**+$ 148.3**	**$4,404.1**	**−$409.4**
Alaska	12.1	14.4	61.8	68.6	+56.5	43.2	−25.4
California	4,296.7	4,553.3	4,298.6	4,289.8	−6.9	3,871.1	−418.7
Hawaii	7.1	41.5	35.0	37.7	+30.6	43.8	+6.1
Oregon	18.2	25.6	35.0	36.1	+17.9	33.8	−2.3
Washington	331.1	214.3	343.9	381.2	+50.1	412.2	+31.0
South Atlantic	**$1,685.3**	**$2,154.9**	**$2,819.7**	**$2,961.3**	**+$1,276.0**	**$2,899.2**	**−$ 62.1**
Delaware	24.6	7.1	13.9	16.1	−8.5	16.3	+.2
District of Columbia	403.9	374.3	443.2	444.3	+40.4	468.5	+24.2
Florida	340.9	459.8	799.1	884.5	+543.6	824.8	−59.7
Georgia	26.7	58.4	280.7	276.8	+250.1	72.3	−204.5
Maryland	675.7	876.6	905.9	961.8	+286.1	1,063.4	+101.6
North Carolina	27.0	57.8	62.4	58.5	+31.5	63.9	+5.4
South Carolina	19.8	17.1	18.7	17.1	−2.7	17.8	+.7
Virginia	158.8	284.2	275.2	286.3	+127.5	352.7	+66.4
West Virginia	7.9	19.6	20.6	16.0	+8.1	19.6	+3.6
Middle Atlantic	**$1,789.2**	**$2,228.6**	**$2,473.4**	**$2,436.1**	**+$ 646.9**	**$2,516.9**	**+$ 80.8**
New Jersey	410.1	410.7	681.8	708.9	+298.8	742.5	+33.6
New York	944.2	1,289.3	1,174.9	1,107.0	+162.8	1,235.6	+128.6
Pennsylvania	434.9	528.7	616.7	620.3	+185.4	538.8	−81.5
Mountain	**$1,068.6**	**$ 990.1**	**$1,093.6**	**$1,136.7**	**+$ 68.1**	**$1,136.8**	**+$ .1**
Arizona	174.6	76.6	71.4	79.2	−95.4	72.8	−6.4
Colorado	240.8	212.3	265.3	264.4	+23.6	274.1	+9.7
Idaho	29.7	63.6	65.6	69.6	+39.9	75.0	+5.4
Montana	8.5	8.6	8.3	8.3	−.2	11.6	+3.3
Nevada	128.9	154.5	223.6	232.3	+103.4	190.9	−41.4
New Mexico	345.9	425.3	413.3	426.3	+80.4	444.1	+17.8
Utah	135.8	45.0	39.7	49.8	−86.0	61.1	+11.3
Wyoming	4.5	4.2	6.4	6.8	+2.3	7.2	+.4
East North Central	**$ 819.5**	**$ 923.7**	**$1,294.0**	**$1,044.3**	**+$ 224.8**	**$1,038.8**	**−$ 5.5**
Illinois	203.9	191.7	239.3	251.2	+47.3	239.6	−11.6
Indiana	57.3	71.9	82.9	108.8	+51.5	91.9	−16.9
Michigan	154.4	155.2	203.4	167.4	+13.0	162.8	−4.6
Ohio	304.3	379.1	653.6	432.6	+128.3	457.3	+24.7
Wisconsin	99.7	125.8	114.8	84.2	−15.5	87.1	+2.9
New England	**$ 702.2**	**$ 992.7**	**$1,009.4**	**$1,085.7**	**+$ 383.5**	**$1,000.8**	**−$ 84.9**
Connecticut	139.3	184.5	133.2	223.6	+84.3	160.0	−63.6
Maine	5.3	4.3	6.0	14.3	+9.0	13.3	−1.0
Massachusetts	515.1	733.7	795.7	775.0	+259.9	760.9	−14.1
New Hampshire	16.9	28.8	36.6	31.0	+14.1	27.3	−3.7
Rhode Island	20.5	37.5	31.1	32.8	+12.3	29.9	−2.9
Vermont	5.2	4.0	6.8	9.0	+3.8	9.5	+.5
West South Central	**$ 608.2**	**$1,143.1**	**$1,188.9**	**$ 894.3**	**+$ 286.1**	**$ 834.9**	**−$ 59.4**
Arkansas	4.2	6.6	8.1	7.4	+3.2	9.8	+2.4
Louisiana	189.2	377.1	272.4	171.8	−17.4	146.5	−25.3
Oklahoma	16.9	28.4	24.0	20.1	+3.2	29.5	+9.4
Texas	397.9	731.0	884.4	695.0	+297.1	649.1	−45.9
East South Central	**$ 420.1**	**$ 628.3**	**$ 655.3**	**$ 597.5**	**+$ 177.4**	**$ 599.7**	**+$ 2.2**
Alabama	246.8	370.7	405.7	358.4	+111.6	357.2	−1.2
Kentucky	11.0	17.1	24.1	21.4	+10.4	20.4	−1.0
Mississippi	16.5	36.7	26.5	26.0	+9.5	28.3	+2.3
Tennessee	145.8	203.7	199.1	191.6	+45.8	193.8	+2.2
West North Central	**$ 376.7**	**$ 408.7**	**$ 321.1**	**$ 328.5**	**−$ 48.2**	**$ 475.4**	**+$146.9**
Iowa	23.3	28.8	41.7	34.2	+10.9	32.7	−1.5
Kansas	21.5	25.7	19.8	39.6	+18.1	16.6	−23.0
Minnesota	73.6	106.3	111.1	89.3	+15.7	109.3	+20.0
Missouri	236.6	231.7	121.1	141.9	−94.7	291.2	+149.3
Nebraska	4.8	7.7	15.4	11.3	+6.5	10.6	−.7
North Dakota	3.4	5.0	6.0	6.8	+3.4	8.9	+2.1
South Dakota	13.5	3.5	6.0	5.4	−8.1	6.1	+.7

geographic division and State, fiscal years 1963, 1965, 1968, 1969, and 1970

[Dollars in millions]

1963	1965	1968	1969	Net increase/ decrease 1963–69	1970	Net increase/ decrease 1969–70
$4,665.2	**$4,849.0**	**$4,774.3**	**$4,813.5**	**+$ 148.3**	**$4,404.1**	**−$409.4**
12.1	14.4	61.8	68.6	+56.5	43.2	−25.4
4,296.7	4,553.3	4,298.6	4,289.8	−6.9	3,871.1	−418.7
7.1	41.5	35.0	37.7	+30.6	43.8	+6.1
18.2	25.6	35.0	36.1	+17.9	33.8	−2.3
331.1	214.3	343.9	381.2	+50.1	412.2	+31.0
$1,685.3	**$2,154.9**	**$2,819.7**	**$2,961.3**	**+$1,276.0**	**$2,899.2**	**−$ 62.1**
24.6	7.1	13.9	16.1	−8.5	16.3	+.2
403.9	374.3	443.2	444.3	+40.4	468.5	+24.2
340.9	459.8	799.1	884.5	+543.6	824.8	−59.7
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27.0	57.8	62.4	58.5	+31.5	63.9	+5.4
19.8	17.1	18.7	17.1	−2.7	17.8	+.7
158.8	284.2	275.2	286.3	+127.5	352.7	+66.4
7.9	19.6	20.6	16.0	+8.1	19.6	+3.6
$1,789.2	**$2,228.6**	**$2,473.4**	**$2,436.1**	**+$ 646.9**	**$2,516.9**	**+$ 80.8**
410.1	410.7	681.8	708.9	+298.8	742.5	+33.6
944.2	1,289.3	1,174.9	1,107.0	+162.8	1,235.6	+128.6
434.9	528.7	616.7	620.3	+185.4	538.8	−81.5
$1,068.6	**$ 990.1**	**$1,093.6**	**$1,136.7**	**+$ 68.1**	**$1,136.8**	**+$ .1**
174.6	76.6	71.4	79.2	−95.4	72.8	−6.4
240.8	212.3	265.3	264.4	+23.6	274.1	+9.7
29.7	63.6	65.6	69.6	+39.9	75.0	+5.4
8.5	8.6	8.3	8.3	−.2	11.6	+3.3
128.9	154.5	223.6	232.3	+103.4	190.9	−41.4
345.9	425.3	413.3	426.3	+80.4	444.1	+17.8
135.8	45.0	39.7	49.8	−86.0	61.1	+11.3
4.5	4.2	6.4	6.8	+2.3	7.2	+.4
$ 819.5	**$ 923.7**	**$1,294.0**	**$1,044.3**	**+$ 224.8**	**$1,038.8**	**−$ 5.5**
203.9	191.7	239.3	251.2	+47.3	239.6	−11.6
57.3	71.9	82.9	108.8	+51.5	91.9	−16.9
154.4	155.2	203.4	167.4	+13.0	162.8	−4.6
304.3	379.1	653.6	432.6	+128.3	457.3	+24.7
99.7	125.8	114.8	84.2	−15.5	87.1	+2.9
$ 702.2	**$ 992.7**	**$1,009.4**	**$1,085.7**	**+$ 383.5**	**$1,000.8**	**−$ 84.9**
139.3	184.5	133.2	223.6	+84.3	160.0	−63.6
5.3	4.3	6.0	14.3	+9.0	13.3	−1.0
515.1	733.7	795.7	775.0	+259.9	760.9	−14.1
16.9	28.8	36.6	31.0	+14.1	27.3	−3.7
20.5	37.5	31.1	32.8	+12.3	29.9	−2.9
5.2	4.0	6.8	9.0	+3.8	9.5	+.5
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$ 420.1	**$ 628.3**	**$ 655.3**	**$ 597.5**	**+$ 177.4**	**$ 599.7**	**+$ 2.2**
246.8	370.7	405.7	358.4	+111.6	357.2	−1.2
11.0	17.1	24.1	21.4	+10.4	20.4	−1.0
16.5	36.7	26.5	26.0	+9.5	28.3	+2.3
145.8	203.7	199.1	191.6	+45.8	193.8	+2.2
$ 376.7	**$ 408.7**	**$ 321.1**	**$ 328.5**	**−$ 48.2**	**$ 475.4**	**+$146.9**
23.3	28.8	41.7	34.2	+10.9	32.7	−1.5
21.5	25.7	19.8	39.6	+18.1	16.6	−23.0
73.6	106.3	111.1	89.3	+15.7	109.3	+20.0
236.6	231.7	121.1	141.9	−94.7	291.2	+149.3
4.8	7.7	15.4	11.3	+6.5	10.6	−.7
3.4	5.0	6.0	6.8	+3.4	8.9	+2.1
13.5	3.5	6.0	5.4	−8.1	6.1	+.7

Mountain

- Within this division, which showed no overall change from 1969 to 1970, the majority of States received small increases that were counterbalanced by the decreases in Nevada and Arizona. The reduction in the work carried out at the Nevada Test Site by AEC's onsite industrial contractor accounted for the fairly sizable drop in Federal support to this State.

East North Central

- This division showed virtually no overall change in its 1970 support level relative to 1969. A moderate gain for Ohio and a small gain for Wisconsin were offset by decreases in Indiana, Illinois, and Michigan. Ohio benefited from a DOD increase in support, most of it for intramural work at Wright Patterson Air Force Base.

New England

- New England experienced a decline in R&D obligations between 1969 and 1970 for the first time in this series. Although all of the States in the division except Vermont showed decreases, the only one with a significant drop was Connecticut. This reduction was the result mainly of a cutback in industrial work for the Air Force occasioned by the cancellation of the Manned Orbiting Laboratory program.

West South Central

- This division continued to decline in 1970 but not by as much as in 1969. Texas registered the greatest loss in support, followed by Louisiana. A reduction in Navy contracts to industry was the major reason for the decline in Federal support to Texas.

East South Central

- There was no significant change in the overall total for the East South Central division between 1969 and 1970 nor in Federal support to the four States that comprise the division.

West North Central

- In 1970 this division showed both the greatest absolute gain and the greatest gain relative to its former total. Almost all of the increase occurred because of Federal support to Missouri through expanded activities of DOD and NASA. In the case of DOD a substantial increase was seen in industrial work on the Air Force F–15 aircraft. In the case of NASA the increase represented industrial research and development related to the orbital workshop and the Skylab program.

THE LEADING STATES

- The 26 leading States together received 95 percent of total Federal R&D funds, and each of these received 1 percent (rounded) or more of the Federal R&D total. Virtually the same pattern persisted throughout the 1963–70 period.

If the 10 leading States are selected for study, they line up as follows in 1970:

Distribution of Federal R&D obligations to the 10 States leading in such support in 1970 for fiscal years 1963, 1965, 1968, 1969, and 1970

State	1963	1965	1968	1969	1970
Total, all States (millions of dollars)	$12,251	$14,357	$15,690	$15,355	$14,981
	Percent distribution				
California	35.1	31.7	27.4	27.9	25.8
New York	7.7	9.0	7.5	7.2	8.2
Maryland	5.5	6.1	5.8	6.3	7.1
Florida	2.8	3.2	5.1	5.8	5.5
Massachusetts	4.2	5.1	5.1	5.0	5.1
New Jersey	3.3	2.9	4.3	4.6	5.0
Texas	3.2	5.1	5.6	4.5	4.3
Pennsylvania	3.6	3.1	3.9	4.0	3.6
District of Columbia	3.3	2.6	2.8	2.9	3.1
Ohio	2.5	2.6	4.2	2.8	3.1
All other States [a]	28.8	28.6	28.3	29.0	29.

[a] Includes outlying areas and offices abroad.

- The States above with the addition of New Mexico comprise a list of 11 States from which the "leading 10" have been drawn in 1963, 1965, 1968, 1969, and 1970. There have, of course, been variations in order from one year to another.
- The 10 leading States together received 71 percent of all Federal R&D funds in 1970, the same share the 10 leading States received in each earlier year surveyed.
- California continues to dominate the scene although its share of the total has dropped considerably, much of this drop reflecting the phase-out of NASA's Apollo program. Almost 9 out of every 10 R&D dollars obligated to California have represented obligations of DOD and NASA throughout the 1963–70 period. Other agencies placing funds to a notable extent in California are AEC, HEW, and NSF. Most of the work has been performed by industry (two-thirds in 1970). However, dollar obligations to industry fell significantly in 1970 from their 1968 and 1969 levels. Important work has also been carried on by all the other performing sectors, including universities and their affiliated research centers.
- New York's yearly R&D performance total has been around $1 billion throughout the 1963–70 period. Nearly three-fourths of the work has been for DOD and NASA, mostly through industrial contracts. In 1970 DOD increases, largely for the Navy's F–14A aircraft program, more than offset the drop-off in work for NASA.
- Maryland is the only State to show a substantial funding increase in each year surveyed. In 1970 Federal R&D support to this State crossed the $1 billion mark. Maryland is the only State of the leading 10, with the exception of the District of Columbia, where intramural performance predominates. Intramural work represented three-fifths of the Maryland total in 1970. A number of the larger Federal laboratories and testing facilities are located in Mary-

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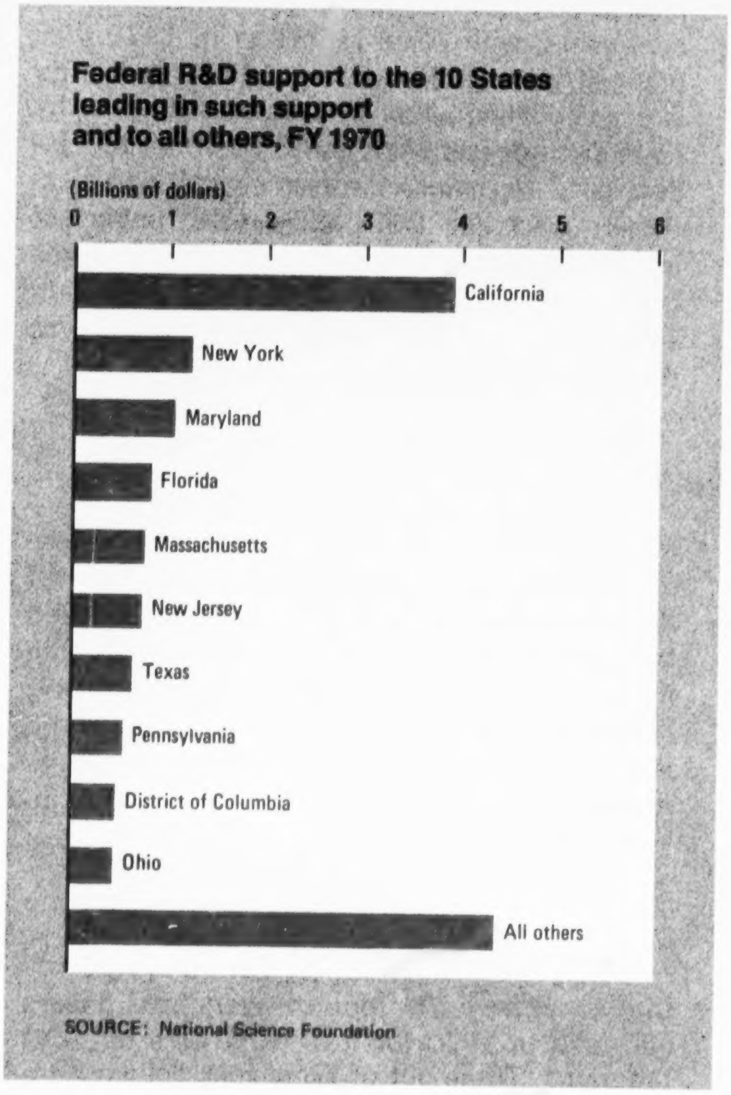
- Florida has risen rapidly in performance in recent years, with some reduction in 1970. Virtually all of the R&D work performed in Florida is accomplished either by industrial firms or by Federal organizational units. Most of the industrial performance involves aircraft and electronics work for DOD and NASA. Important intramural work is represented by Air Force testing of missiles and aircraft at the Eastern Test Range and by NASA's many activities at the Kennedy Space Center.

- Massachusetts' R&D efforts continue to be predominantly directed to DOD programs. Two out of every three Federal R&D dollars obligated to Massachusetts in 1970 were from DOD, with most of the work performed by industrial firms. However, sizable portions were also carried out at Federal installations and at FFRDC's administered by universities or other nonprofit institutions.

- In New Jersey four out of every five dollars obligated in 1970 for R&D work were for DOD programs. Three out of every four dollars were obligated to industrial firms; the Army's Safeguard antiballistic missile system was the chief program involved. Virtually all of the remaining dollars were directed to R&D performance at intramural facilities.



Federal R&D support to the 10 States leading in such support and to all others, FY 1970

SOURCE: National Science Foundation

- The Texas R&D total continued to decline in 1970 from its 1968 high. Smaller DOD obligations to industry for the Air Force F-111 fighter accounted for the overall decrease. In contrast, NASA, the other important support agency, slightly increased R&D funding in 1970. NASA's programs included industrial work on the Apollo spacecraft systems analysis project and intramural R&D work at the Manned Spacecraft Center in Houston.
- Pennsylvania also showed a dollar drop in R&D performance in 1970 that was mainly the result of a decrease in DOD support (primarily Air Force work by industrial firms). DOD still remains the principal supporter of R&D work in Pennsylvania; the Air Force remains the principal supporter of industrial performance and the Navy the primary support of intramural work. AEC supports research and development at the Bettis Atomic Power Laboratory, an industry-managed FFRDC.
- The District of Columbia received greater Federal R&D support in 1970 than in 1969. Seven out of 10 dollars were assigned to Federal intramural performance. For all the reporting agencies except OEO the intramural sector was the most heavily funded one within the District, and DOD accounted for almost three-fifths of the intramural total in 1970. Intramural performance includes R&D work proper as well as administration of extramural contracts and grants.
- Ohio also rose in support in 1970. This State receives R&D funds principally from DOD, both for industrial and for intramural work. Next, it receives R&D funds from NASA. For both these agencies intramural work exceeded industrial. Examples are the activities carried out for DOD at Wright Patterson Air Force Base and for NASA at the Lewis Research Center in Cleveland.

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DISPERSION OF FUNDS BY AGENCY

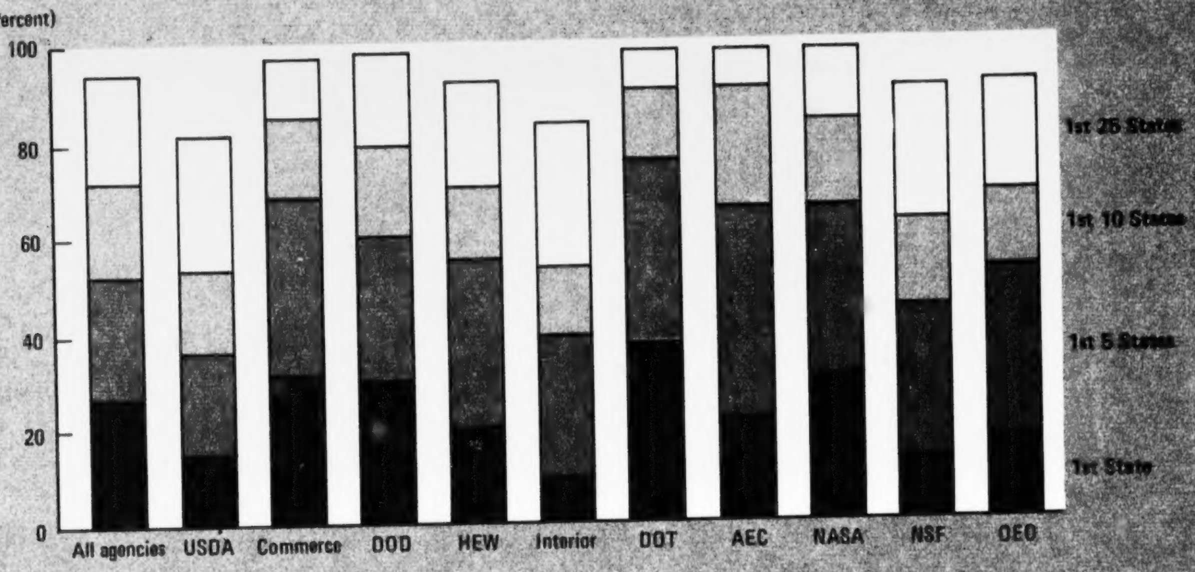
- Among the agencies, DOD, because of its dominance, displays a distribution pattern close to the overall one. Nine out of 10 States leading in DOD support were among the 10 leading States in total Federal R&D support in 1970.

- For HEW also, 8 of its 10 leading States were among the 10 overall Federal leaders, and the same was true for OEO. For DOT 7 of its 10 leading States were on the overall "leading 10" list, and the same was true for Commerce. For NSF the comparable number was six, and for USDA and NASA the comparable number was five in each case.

- Only Interior and AEC showed more than one-half their leading 10 States as outside the overall "leading 10" group. Both these agencies tended to place R&D funds in States in the West.

- The level of dispersion reflects in large part the purpose or mission of a particular agency. USDA and Interior, for example, are more oriented to local situations and cover all areas of the country, hence, lower percentages of their R&D funds are received by their leading 25 States than is the case with other agencies. DOD, NASA, AEC, and DOT are more concerned with specific performer capability and use this capability in areas where it already exists; the shares allotted to the 25 leading States for each of these agencies are consequently high.

R&D obligations of each agency to the 25 States leading in such support, FY 1970

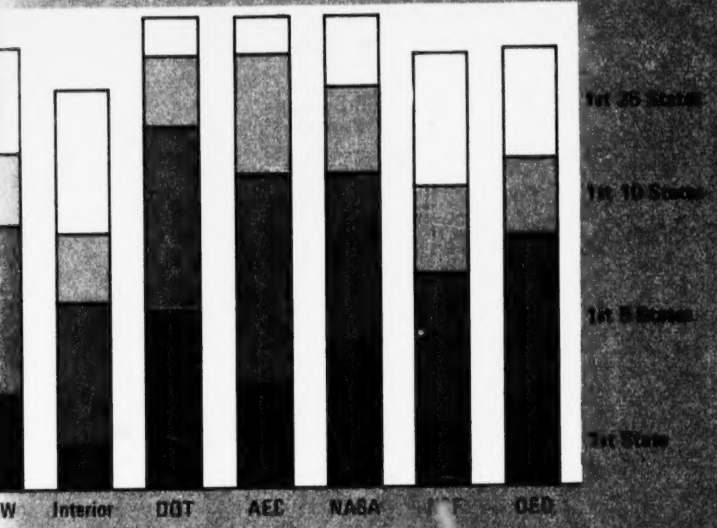


State Rank for the 10 States leading in Federal R&D support, overall and by agency, FY 1970

State	All agencies	USDA	Commerce	DOD	HEW	Interior	DOT	AEC	NASA	NSF	OEO
Total R&D (millions of dollars)	$14,981	$276	$120	$7,350	$1,205	$158	$317	$1,345	$3,799	$287	$123
California	1	2	6	1	3	1	5	1	1	1	3
New York	2		4	3	2		6	4	4	2	2
Maryland	3	1	1	5	1	3	10		6		8
Florida	4		7	6					2	9	
Massachusetts	5		8	4	4		8			4	5
New Jersey	6			2			3				9
Texas	7	7	10		8				3		
Pennsylvania	8	8		7	5	4		6		7	7
District of Columbia	9	3	2	9	7	5	4			3	1
Ohio	10			8	9		2				10
New Mexico								2			
Washington			5				1	9			
Alabama									5		
Virginia				10			7		9		
Missouri									10		
Colorado			3			2			7	5	
Illinois		6			6			7		6	6
Tennessee								5			
Nevada						9		3			
Michigan										8	
Louisiana		4							8		
Wisconsin		9									4
Idaho								8			
Arizona										10	
Georgia		5									
North Carolina					10						
Alaska			9			7		10			
Oregon						8					
Oklahoma							9				
Mississippi		10									
West Virginia						10					
Wyoming						6					

Source: National Science Foundation

e 25 States leading in such support, FY 1970



eral R&D support, overall and by agency, FY 1970

DOD	HEW	Interior	DOT	AEC	NASA	NSF	OEO
$7,350	$1,205	$158	$317	$1,345	$3,799	$287	$123
1	3	1	5	1	1	1	3
3	2		6	4	4	2	2
5	1	3	10		6		8
6					2	9	
4	4		8			4	5
2			3				9
	8				3		
7	5	4		6		7	7
9	7	5	4			3	1
8	9		2				10
				2			
			1	9			
					5		
10			7		9		
					10		
		2			7	5	
	6			7		6	6
				5			
		9		3			
						8	
					8		
							4
				8			
						10	
	10						
		7		10			
		8					
			9				
		10					
		6					

The 10 States leading in Federal R&D obligations in FY 1970 compared with their relative positions among all States in Federal R&D support of performer groups

States leading in Federal R&D support	Percent of total Federal R&D support	Position among all States in Federal R&D support of performer groups					
		Federal intramural	Industrial firms[a]	Universities and colleges	FFRDC's administered by universities	Other nonprofit institutions[a]	Other
1. California	25.8	2	1	1	1	1	2
2. New York	8.2	13	2	2	5	3	1
3. Maryland	7.1	1	9	9	6	10	4
4. Florida	5.5	4	4	13	------	28	12
5. Massachusetts	5.1	11	6	3	4	2	7
6. New Jersey	5.0	9	3	19	9	18	10
7. Texas	4.3	8	5	6	------	12	5
8. Pennsylvania	3.6	12	7	5	11	9	6
9. District of Columbia	3.1	3	21	22	18	5	3
10. Ohio	3.1	6	13	8	------	6	9
All other States	29.2	------	------	------	------	------	------

[a] Includes FFRDC's administered by this sector.

FACTORS IN R&D PERFORMING STRENGTH

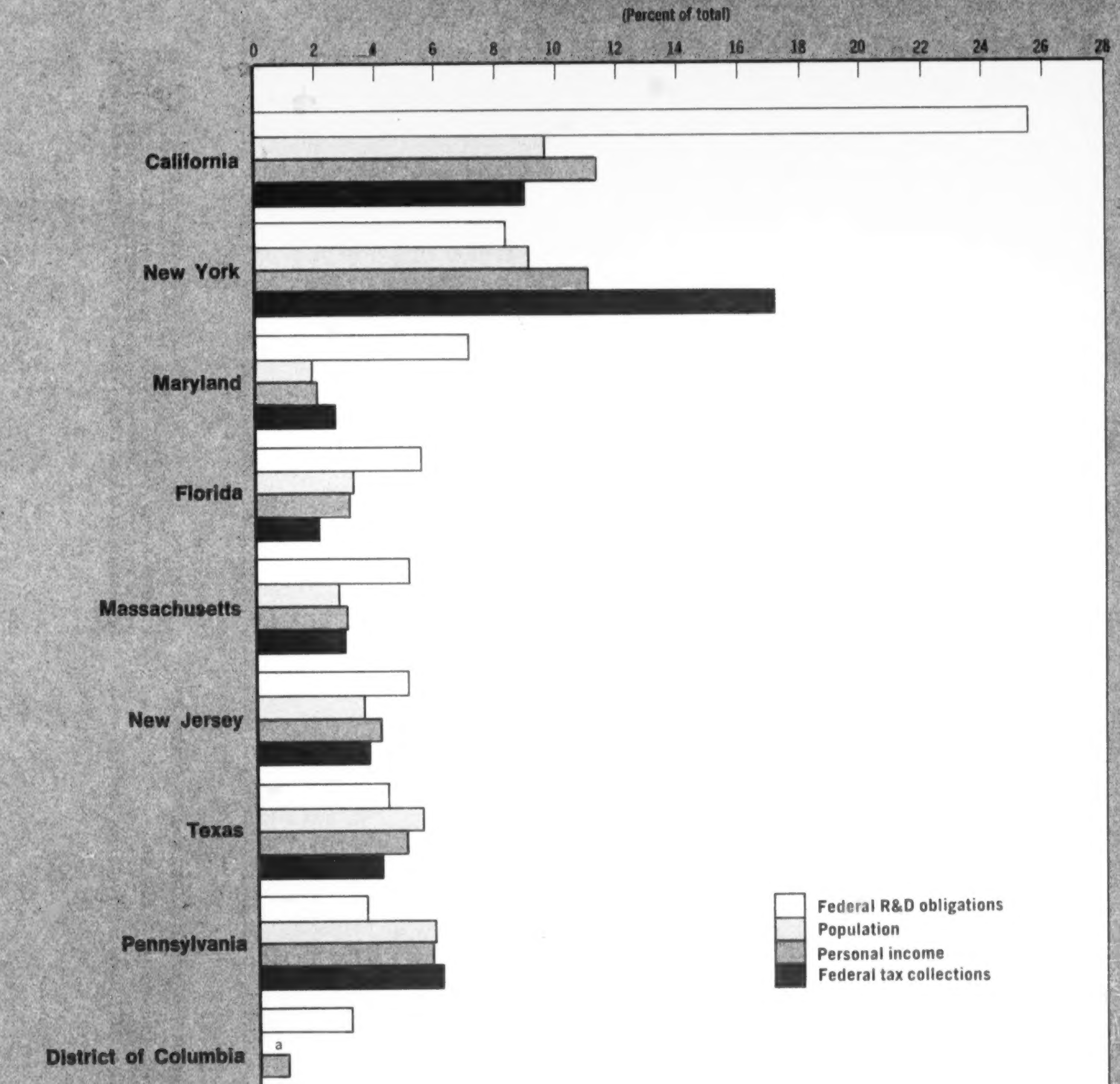
- In 1970 there were 23 States that received more than $100 million in Federal R&D obligations.

- Many of these States are highly industrialized, containing aircraft and electronics manufacturing firms, electrical equipment and communications firms, machinery and chemical producers. Among the 10 leading R&D support States on an overall basis, eight were among the leading 10 in Federal R&D obligations to industry.

- Most of the States strong in Federal support show strength in a number of performer categories. Seven States among the 10 overall leaders were among the leading 10 States in Federal R&D support to universities and colleges; seven were among the leading 10 in Federal intramural performance; and seven were among the 10 leaders in Federal R&D support to other nonprofit institutions.

- The continuance of substantial Federal R&D support in a State is usually dependent on performer capability in several sectors. However, some States receive agency funds because they offer advantages of one particular kind, such as: Nevada for weapons testing or West Virginia for astronomical observations.

Distribution of Federal R&D obligations to the 10 States leading in such support compared with other measures of national activity, FY 1970

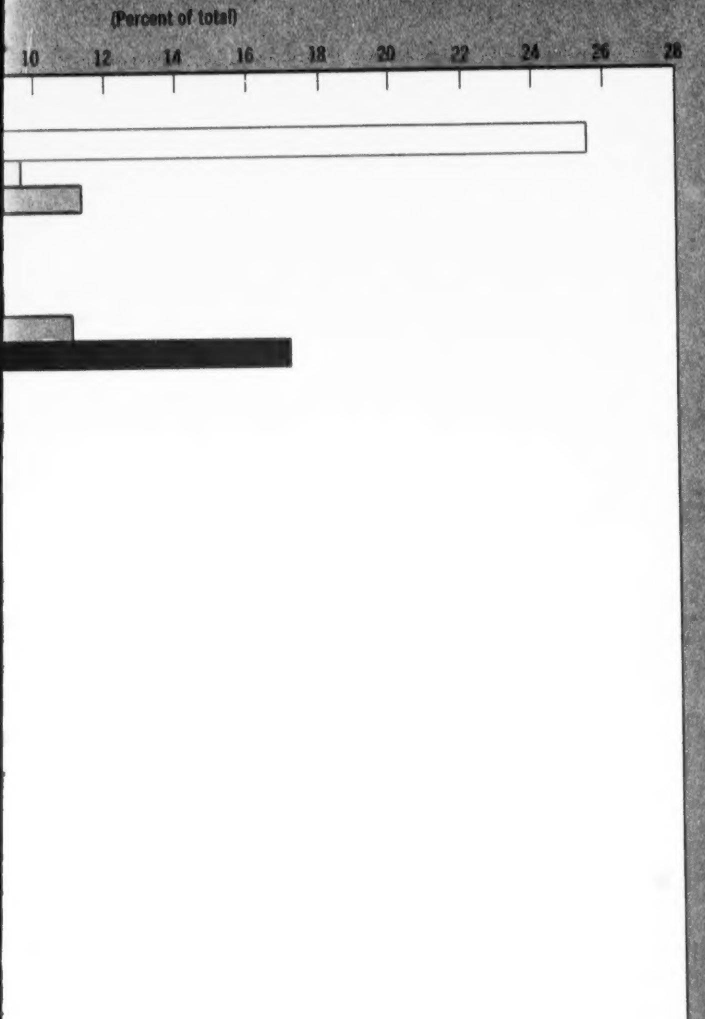


[a] Less than 0.5 percent

[b] Included in Maryland tax figures

SOURCES: U.S. Department of Commerce; U.S. Department of the Treasury; and National Science Foundation

e 10 States leading in such support
ctivity, FY 1970



d National Science Foundation

- R&D obligations can be ranked by State and compared with such measures of national activity as population, total personal income, and total Federal taxes. Although no direct cause and effect conclusions can be drawn, the data tend to indicate that the wider choice of skills and institutions found in more populous and wealth-producing areas is related to the selection of given States for R&D performance.

Distribution of Federal R&D obligations by State compared with other measures of national activity, by State, 1970

State	Total Federal R&D obligations		Population		Total personal income		Total Federal taxes[a]	
	Rank	Percent of total	Rank	Percent of total	Rank	Percent of total	Rank	Percent of total
United States, total (in millions)	$14,981		[b] 203		$797,075		$180,339	
California	1	25.84	1	9.82	1	11.26	2	8.92
New York	2	8.25	2	8.98	2	10.97	1	17.19
Maryland	3	7.10	18	1.93	13	2.10	10	2.67
Florida	4	5.51	9	3.34	9	3.08	14	2.12
Massachusetts	5	5.08	10	2.80	10	3.07	9	2.85
New Jersey	6	4.96	8	3.53	8	4.10	8	3.68
Texas	7	4.33	4	5.51	6	4.96	7	4.22
Pennsylvania	8	3.60	3	5.80	4	5.77	6	6.07
District of Columbia	9	3.13	41	.37	36	.52	(c)	(c)
Ohio	10	3.05	6	5.24	5	5.34	5	6.08
New Mexico	11	2.96	37	.50	41	.39	44	.20
Washington	12	2.75	22	1.68	20	1.72	21	1.31
Alabama	13	2.38	21	1.69	25	1.22	28	.71
Virginia	14	2.35	14	2.29	14	2.10	19	1.45
Missouri	15	1.94	13	2.30	12	2.15	11	2.66
Colorado	16	1.83	30	1.09	28	1.05	22	1.28
Illinois	17	1.60	5	5.47	3	6.31	3	7.70
Tennessee	18	1.29	17	1.93	21	1.51	23	1.01
Nevada	19	1.27	48	.24	46	.28	43	.21
Michigan	20	1.09	7	4.37	7	4.52	4	6.95
Connecticut	21	1.07	24	1.49	18	1.84	17	1.79
Louisiana	22	.98	20	1.79	22	1.41	25	.83
Minnesota	23	.73	19	1.87	19	1.82	15	1.82
Indiana	24	.61	11	2.56	11	2.47	12	2.42
Wisconsin	25	.58	16	2.17	15	2.07	16	1.80
Idaho	26	.50	43	.35	45	.29	41	.23
Arizona	27	.49	33	.87	31	.79	34	.43
Georgia	28	.48	15	2.26	17	1.89	18	1.49
North Carolina	29	.43	12	2.50	16	2.04	13	2.18
Utah	30	.41	36	.52	39	.43	39	.24
Hawaii	31	.29	40	.38	38	.43	38	.30
Alaska	32	.29	51	.15	50	.18	49	.08
Oregon	33	.23	31	1.03	29	.98	27	.73
Iowa	34	.22	25	1.39	23	1.32	26	.81
Rhode Island	35	.20	39	.47	37	.47	33	.44
Oklahoma	36	.20	27	1.26	27	1.05	24	.88
Mississippi	37	.19	29	1.09	32	.71	37	.32
New Hampshire	38	.18	41	.36	42	.34	42	.22
Kentucky	39	.14	23	1.58	24	1.24	20	1.40
West Virginia	40	.13	34	.86	35	.64	35	.33
South Carolina	41	.12	26	1.27	30	.95	32	.53
Kansas	42	.11	28	1.11	26	1.07	30	.64
Delaware	43	.11	47	.27	44	.29	29	.67

Pennsylvania	8	3.60	3	5.80	4	5.77	6	6.07
District of Columbia	9	3.13	41	.37	36	.52	(c)	(c)
Ohio	10	3.05	6	5.24	5	5.34	5	6.08
New Mexico	11	2.96	37	.50	41	.39	44	.20
Washington	12	2.75	22	1.68	20	1.72	21	1.31
Alabama	13	2.38	21	1.69	25	1.22	28	.71
Virginia	14	2.35	14	2.29	14	2.10	19	1.45
Missouri	15	1.94	13	2.30	12	2.15	11	2.66
Colorado	16	1.83	30	1.09	28	1.05	22	1.28
Illinois	17	1.60	5	5.47	3	6.31	3	7.70
Tennessee	18	1.29	17	1.93	21	1.51	23	1.01
Nevada	19	1.27	48	.24	46	.28	43	.21
Michigan	20	1.09	7	4.37	7	4.52	4	6.95
Connecticut	21	1.07	24	1.49	18	1.84	17	1.79
Louisiana	22	.98	20	1.79	22	1.41	25	.83
Minnesota	23	.73	19	1.87	19	1.82	15	1.82
Indiana	24	.61	11	2.56	11	2.47	12	2.42
Wisconsin	25	.58	16	2.17	15	2.07	16	1.80
Idaho	26	.50	43	.35	45	.29	41	.23
Arizona	27	.49	33	.87	31	.79	34	.43
Georgia	28	.48	15	2.26	17	1.89	18	1.49
North Carolina	29	.43	12	2.50	16	2.04	13	2.18
Utah	30	.41	36	.52	39	.43	39	.24
Hawaii	31	.29	40	.38	38	.43	38	.30
Alaska	32	.29	51	.15	50	.18	49	.08
Oregon	33	.23	31	1.03	29	.98	27	.73
Iowa	34	.22	25	1.39	23	1.32	26	.81
Rhode Island	35	.20	39	.47	37	.47	33	.44
Oklahoma	36	.20	27	1.26	27	1.05	24	.88
Mississippi	37	.19	29	1.09	32	.71	37	.32
New Hampshire	38	.18	41	.36	42	.34	42	.22
Kentucky	39	.14	23	1.58	24	1.24	20	1.40
West Virginia	40	.13	34	.86	35	.64	35	.33
South Carolina	41	.12	26	1.27	30	.95	32	.53
Kansas	42	.11	28	1.11	26	1.07	30	.64
Delaware	43	.11	47	.27	44	.29	29	.67
Maine	44	.09	38	.49	40	.40	40	.24
Montana	45	.08	44	.34	43	.29	45	.14
Nebraska	46	.07	35	.73	33	.69	31	.58
Arkansas	47	.07	32	.95	34	.66	36	.33
Vermont	48	.06	50	.22	49	.20	48	.11
North Dakota	49	.06	46	.30	48	.23	47	.12
Wyoming	50	.05	49	.16	51	.14	50	.08
South Dakota	51	.04	45	.33	47	.27	46	.12
Outlying areas and offices abroad		.49						[d] .43

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[a] Includes individual income and employment taxes, corporation, excise, estate, and gift taxes (minus refunds).

[b] Includes persons stationed in the armed forces in each area.

[c] Included in Maryland tax figures.

[d] Collections from and refunds to U.S. taxpayers in Puerto Rico, Canal Zone, and in foreign countries.

Sources: U.S. Department of Commerce, **Population Estimates and Projections,** Series P-25, No. 460, June 7, 1971; U.S. Department of Commerce, Office of Business Economics, **Survey of Current Business,** Volume 51, No. 4, April 1971; U.S. Department of the Treasury, **Statistical Appendix to Annual Report of the Secretary of the Treasury on the State of the Finances for the Fiscal Year Ended June 30, 1970.**

R&D PLANT

- R&D plant funding distribution has shifted somewhat over the years as new programs have been initiated. A salient feature of such funding has been its sharp reduction since the mid-1960's. The R&D plant total of $520 million in 1970 was 22 percent less than the 1969 total and 55 percent less than the 1963 total.
- Alabama and Texas were among the leading 10 States in R&D plant obligations in 1963 but were not included in the 1970 list because NASA had completed its construction programs in those States. Also, R&D plant obligations to Florida had diminished by 1970 to a small fraction of their 1963 level, largely for the same reason, and California's R&D plant support funds in 1970 had dropped well below their 1963 level.
- Idaho and Pennsylvania were the only States on the "leading 10" list in 1970 but not in 1963.
- Only New Mexico and Illinois showed increases from their 1963 totals. Illinois' leadership among all the States in 1970 represented construction activity on AEC's 200-BeV accelerator in Weston.

IMPACT OF SUBCONTRACTING

As previously noted, data on geographic distribution in this report are based on the location of prime contractors performing R&D work. Therefore, they do not reflect the redistribution of Federal R&D funds among the States as a result of subcontracting.

Federal obligations for R&D plant in the 10 States leading in such support, by agency, FY 1970

[Dollars in millions]

	TOTAL	AEC	DOD	NASA	HEW	NSF	INT.	USDA	DOT	COMMERCE
TOTAL	**$520**	**$266**	**$141**	**$33**	**$31**	**$23**	**$11**	**$5**	**$5**	**$4**
Illinois	95	86	5	–	–	–	2	a	–	–
California	86	29	32	17	5	3	a	a	a	a
New Mexico	64	47	16	–	–	–	a	a	–	–
Florida	33	a	25	5	2	1	a	a	–	a
New York	27	22	2	a	–	2	1	a	–	a
Idaho	23	23	–	a	–	a	a	a	–	a
Ohio	20	1	7	4	9	a	a	a	–	–
Maryland	20	a	18	1	a	a	a	a	a	1
Pennsylvania	19	11	2	a	–	4	2	a	a	–
Nevada	17	14	3	a	–	a	–	a	–	–
Other States[b]	115	33	31	6	15	12	6	5	5	3

a/ Less than $500,000.

b/ Includes outlying areas and offices abroad.

- Idaho and Pennsylvania were the only States on the "leading 10" list in 1970 but not in 1963.
- Only New Mexico and Illinois showed increases from their 1963 totals. Illinois' leadership among all the States in 1970 represented construction activity on AEC's 200-BeV accelerator in Weston.

IMPACT OF SUBCONTRACTING

As previously noted, data on geographic distribution in this report are based on the location of prime contractors performing R&D work. Therefore, they do not reflect the redistribution of Federal R&D funds among the States as a result of subcontracting.

plant in the 10 States leading
agency, FY 1970

n millions]

HEW	NSF	INT.	USDA	DOT	COMMERCE
$31	$23	$11	$5	$5	$4
—	—	2	a	—	—
5	3	a	a	a	a
—	—	a	a	—	—
2	1	a	a	—	a
—	2	1	a	—	a
—	a	a	a	—	a
9	a	a	a	—	—
a	a	a	a	a	1
—	4	2	a	a	—
—	a	—	a	—	—
15	12	6	5	5	3

In order to provide some understanding of the impact of subcontracting, the responding agencies were requested to report the geographic distribution of 1970 first-tier subcontracting under each new, or continuing, prime contract or grant for which $20 million or more was obligated in 1970. The request was for data on first-tier subcontracts awarded in 1970 regardless of the year of the appropriation funding the subcontract.

DOD and AEC together provided first-tier subcontracting data for 40 prime contracts. NASA has a reporting system which provides information on all first-tier subcontracts in excess of $10,000 on each of the agency's prime contracts in excess of $500,000 and on second-tier subcontracts in excess of $10,000 on each of the first-tier subcontracts in excess of $50,000. The remaining seven agencies participating in this survey did not have prime contracts or subcontracts meeting the criteria established in the survey.

Most of the subcontracting is done by industrial firms; subcontracting is considerably less important with most of the other performers. Since more than 95 percent of total performance by industry (including industry-administered FFRDC's) as reported in this survey was in support of the programs of DOD, AEC, and NASA, the subcontracting of these three agencies largely determines the overall geographic impact of R&D subcontracting.

The sample shows that significant redistribution of R&D funds among States would be reflected by full subcontracting data. The share of the leading R&D support States would tend to decrease somewhat (although the net change would be small in relation to their prime contracts), but in the case of many smaller support States, the net increase from subcontracts would be important in relation to prime contracts awarded.

U. S. geographical distribution of NASA prime contract and subcontract awards fiscal year 1970

[Dollars in thousands]

State	Prime contract awards to State		Subcontract awards			Net total—prime contract and subcontract awards	
	Amount	Percent of total	Received from other States	Awarded to other States	Net Total	Amount [a]	Percent of total
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Total	$2,830,988	100.0	$288,269	$288,269	$-------	$2,830,988	100.0
Alabama	155,005	5.5	2,253	12,088	[b] 9,835	145,170	5.1
Alaska	295	(c)	51	-------	51	346	(c)
Arizona	6,707	.2	8,192	160	8,032	14,739	.5
Arkansas	64	(c)	-------	-------	-------	64	(c)
California	874,791	30.9	85,522	107,476	[b] 21,954	852,837	30.1
Colorado	119,579	4.2	7,974	29,857	[b] 21,883	97,696	3.5
Connecticut	26,213	.9	12,024	2,285	9,739	35,952	1.3
Delaware	13,399	.5	80	-------	80	13,479	.5
District of Columbia	31,061	1.1	32	35	[b] 3	31,058	1.1
Florida	295,379	10.4	4,193	6,483	[b] 2,290	293,089	10.4
Georgia	3,596	.1	327	-------	327	3,923	.1
Hawaii	3,978	.1	-------	-------	-------	3,978	.1
Idaho	150	(c)	-------	-------	-------	150	(c)
Illinois	9,877	.3	1,486	-------	1,486	11,363	.4
Indiana	4,427	.2	920	-------	920	5,347	.2
Iowa	4,039	.1	1,359	37	1,322	5,361	.2
Kansas	1,100	(c)	-------	-------	-------	1,100	(c)
Kentucky	325	(c)	42	-------	42	367	(c)
Louisiana	109,092	3.9	144	1,767	[b] 1,623	107,469	3.8
Maine	4,490	.2	-------	-------	-------	4,490	.2
Maryland	140,901	5.0	1,361	1,472	[b] 111	140,790	5.0
Massachusetts	82,341	2.9	22,721	3,137	19,584	101,925	3.6
Michigan	27,489	1.0	2,244	2,045	199	27,688	1.0
Minnesota	30,641	1.1	5,303	301	5,002	35,643	1.3
Mississippi	1,969	.1	2,324	45	2,279	4,248	.2
Missouri	103,412	3.7	2,261	26,083	[b] 23,822	79,590	2.8
Nebraska	111	(c)	1,551	630	921	1,032	(c)
Nevada	863	(c)	-------	-------	-------	863	(c)
New Hampshire	3,647	.1	291	-------	291	3,938	.1
New Jersey	53,786	1.9	36,803	6,477	30,326	84,112	3.0
New Mexico	9,491	.3	303	-------	303	9,794	.3
New York	299,878	10.6	11,589	68,600	[b] 57,011	242,867	8.6
North Carolina	2,359	.1	242	-------	242	2,601	.1
North Dakota	-------	-------	12	-------	12	12	(c)
Ohio	37,950	1.3	4,577	2,973	1,604	39,554	1.4
Oklahoma	1,126	(c)	440	38	402	1,528	.1
Oregon	579	(c)	174	-------	174	753	(c)
Pennsylvania	44,069	1.6	41,107	1,699	39,408	83,477	2.9
Rhode Island	667	(c)	301	-------	301	968	(c)
South Carolina	270	(c)	14	-------	14	284	(c)
South Dakota	57	(c)	-------	-------	-------	57	(c)
Tennessee	1,614	.1	448	-------	448	2,062	.1
Texas	266,468	9.4	22,813	9,675	13,138	279,606	9.9
Utah	1,306	(c)	103	89	14	1,320	(c)
Vermont	171	(c)	464	-------	464	635	(c)
Virginia	30,470	1.1	1,219	24	1,195	31,665	1.1
Washington	4,301	.2	3,316	-------	3,316	7,617	.3
West Virginia	313	(c)	-------	-------	-------	313	(c)
Wisconsin	21,054	.7	1,689	4,793	[b] 3,104	17,950	.6
Wyoming	118	(c)	-------	-------	-------	118	(c)

NOTE: Prime contract awards include awards on R&D contracts and awards to educational and nonprofit institutions of $10,000 and over and on all other contracts of $25,000 and over; they exclude awards placed through other Government agencies, awards outside the U.S., and actions on the JPL contracts. Subcontract awards include those of $10,000 and over on prime contracts of $500,000 and over.

[a] Column (b) plus or minus column (f).
[b] Awards to other States exceed the awards from other States.
[c] Less than 0.5 percent.
Source: NASA, Annual Procurement Report, Fiscal Year 1970.

NASA prime contract and subcontract awards fiscal year 1970

[Dollars in thousands]

Prime contract awards to State		Subcontract awards			Net total—prime contract and subcontract awards	
Amount	Percent of total	Received from other States	Awarded to other States	Net Total	Amount [a]	Percent of total
(b)	(c)	(d)	(e)	(f)	(g)	(h)
$2,830,988	100.0	$288,269	$288,269	$-------	$2,830,988	100.0
155,005	5.5	2,253	12,088	[b] 9,835	145,170	5.1
295	(c)	51	-------	51	346	(c)
6,707	.2	8,192	160	8,032	14,739	.5
64	(c)	-------	-------	-------	64	(c)
874,791	30.9	85,522	107,476	[b] 21,954	852,837	30.1
119,579	4.2	7,974	29,857	[b] 21,883	97,696	3.5
26,213	.9	12,024	2,285	9,739	35,952	1.3
13,399	.5	80	-------	80	13,479	.5
31,061	1.1	32	35	[b] 3	31,058	1.1
295,379	10.4	4,193	6,483	[b] 2,290	293,089	10.4
3,596	.1	327	-------	327	3,923	.1
3,978	.1	-------	-------	-------	3,978	.1
150	(c)	-------	-------	-------	150	(c)
9,877	.3	1,486	-------	1,486	11,363	.4
4,427	.2	920	-------	920	5,347	.2
4,039	.1	1,359	37	1,322	5,361	.2
1,100	(c)	-------	-------	-------	1,100	(c)
325	(c)	42	-------	42	367	(c)
109,092	3.9	144	1,767	[b] 1,623	107,469	3.8
4,490	.2	-------	-------	-------	4,490	.2
140,901	5.0	1,361	1,472	[b] 111	140,790	5.0
82,341	2.9	22,721	3,137	19,584	101,925	3.6
27,489	1.0	2,244	2,045	199	27,688	1.0
30,641	1.1	5,303	301	5,002	35,643	1.3
1,969	.1	2,324	45	2,279	4,248	.2
103,412	3.7	2,261	26,083	[b] 23,822	79,590	2.8
111	(c)	1,551	630	921	1,032	(c)
863	(c)	-------	-------	-------	863	(c)
3,647	.1	291	-------	291	3,938	.1
53,786	1.9	36,803	6,477	30,326	84,112	3.0
9,491	.3	303	-------	303	9,794	.3
299,878	10.6	11,589	68,600	[b] 57,011	242,867	8.6
2,359	.1	242	-------	242	2,601	.1
-------	-------	12	-------	12	12	(c)
37,950	1.3	4,577	2,973	1,604	39,554	1.4
1,126	(c)	440	38	402	1,528	.1
579	(c)	174	-------	174	753	(c)
44,069	1.6	41,107	1,699	39,408	83,477	2.9
667	(c)	301	-------	301	968	(c)
270	(c)	14	-------	14	284	(c)
57	(c)	-------	-------	-------	57	(c)
1,614	.1	448	-------	448	2,062	.1
266,468	9.4	22,813	9,675	13,138	279,606	9.9
1,306	(c)	103	89	14	1,320	(c)
171	(c)	464	-------	464	635	(c)
30,470	1.1	1,219	24	1,195	31,665	1.1
4,301	.2	3,316	-------	3,316	7,617	.3
313	(c)	-------	-------	-------	313	(c)
21,054	.7	1,689	4,793	[b] 3,104	17,950	.6
118	(c)	-------	-------	-------	118	(c)

d awards to edu-
ther contracts of
nment agencies,
t awards include

[a] Column (b) plus or minus column (f).
[b] Awards to other States exceed the awards from other States.
[c] Less than 0.5 percent.
Source: NASA, Annual Procurement Report, Fiscal Year 1970.

NASA

- NASA subcontracts in 1970 totaled $444 million. Of this total, $156 million, or 35 percent, remained within the prime contract State, and $288 million, or 65 percent, crossed State lines.
- These subcontract dollars originated from prime contracts in 22 States and the District of Columbia. However, the subcontracts were performed in 40 States and the District of Columbia.
- As a result, 31 States showed an increase in their share of procurements, and 9 States and the District of Columbia showed a decrease.
- Eight of the 9 States showing a decrease as a result of subcontracting were among the 10 largest States in terms of 1970 prime contract awards.

DOD and AEC

- Those prime contracts reported by DOD and AEC together totaled $2,630 million, and first-tier subcontracts totaled $1,027 million.
- Of the subcontract dollars, $148 million, or 14 percent, remained within the prime contract State and $880 million, or 86 percent, crossed State lines.
- As a result of subcontracting, 34 States, the District of Columbia, and Canada showed increases, and 9 States showed decreases from their prime contract totals.

(For detailed data on this section see appendix tables C-82 through C-87.)

Geographic distribution of 40 DOD and AEC prime contra

[Dollars in thous

State	Prime contract awards to State	
	Amount	Percent of total
(a)	(b)	(c)
United States, total	$2,629,947	100.
Alabama	----------	----------
Alaska	----------	----------
Arizona	----------	----------
Arkansas	----------	----------
California	879,445	33.
Colorado	----------	----------
Connecticut	----------	----------
Delaware	----------	----------
District of Columbia	----------	----------
Florida	----------	----------
Georgia	----------	----------
Hawaii	----------	----------
Idaho	48,100	1.
Illinois	152,500	5.
Indiana	----------	----------
Iowa	----------	----------
Kansas	----------	----------
Kentucky	----------	----------
Louisiana	----------	----------
Maine	----------	----------
Maryland	----------	----------
Massachusetts	55,500	2.
Michigan	33,000	1.
Minnesota	----------	----------
Mississippi	----------	----------
Missouri	----------	----------
Montana	----------	----------
Nebraska	----------	----------
Nevada	168,000	6.
New Hampshire	----------	----------
New Jersey	314,600	12.
New Mexico	357,200	13.
New York	159,600	6.
North Carolina	----------	----------
North Dakota	----------	----------
Ohio	----------	----------
Oklahoma	----------	----------
Oregon	----------	----------
Pennsylvania	159,900	6.
Rhode Island	----------	----------
South Carolina	----------	----------
South Dakota	----------	----------
Tennessee	93,700	3.
Texas	69,272	2.
Utah	----------	----------
Vermont	----------	----------
Virginia	----------	----------
Washington	139,130	5.
West Virginia	----------	----------
Wisconsin	----------	----------
Wyoming	----------	----------
Canada	----------	----------

[a] Column (b) plus or minus (f).
[b] Awards to other States exceed the awards from other States.
[c] Less than .05 percent.

Source: National Science Foundation.

Geographic distribution of 40 DOD and AEC prime contracts and first-tier subcontract awards, FY 1970

[Dollars in thousands]

State	Prime contract awards to State		Subcontract awards			Net total—prime contract and sub-contract awards	
	Amount	Percent of total	Received from other States	Awarded to other States	Net Total	Amount[a]	Percent of total
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
United States, total	$2,629,947	100.0	$879,649	$879,649		$2,629,947	100.0
Alabama			10,293		10,293	10,293	.4
Alaska			1,016		1,016	1,016	(c)
Arizona			9,256		9,256	9,256	.4
Arkansas							
California	879,445	33.4	195,551	266,297	[b] 70,746	808,699	30.7
Colorado			5,313		5,313	5,313	.2
Connecticut			18,955		18,955	18,955	.7
Delaware			179		179	179	(c)
District of Columbia			3,927		3,927	3,927	.1
Florida			77,026		77,026	77,026	2.9
Georgia			930		930	930	(c)
Hawaii			3,500		3,500	3,500	.1
Idaho	48,100	1.8	8,231	8,475	[b] 244	47,856	1.8
Illinois	152,500	5.8	6,915	25,112	[b] 18,197	134,303	5.1
Indiana			1,178		1,178	1,178	(c)
Iowa			7,342		7,342	7,342	.3
Kansas							
Kentucky			1,068		1,068	1,068	(c)
Louisiana			157		157	157	(c)
Maine			1,603		1,603	1,603	.1
Maryland			8,433		8,433	8,433	.3
Massachusetts	55,500	2.1	49,426	12,016	37,410	92,910	3.5
Michigan	33,000	1.3	5,773	9,645	[b] 3,872	29,128	1.1
Minnesota			70,175		70,175	70,175	2.7
Mississippi			10		10	10	(c)
Missouri			13,226		13,226	13,226	.5
Montana							
Nebraska			1		1	1	(c)
Nevada	168,000	6.4	3,585	41,649	[b] 38,064	129,936	4.9
New Hampshire			28,728		28,728	28,728	1.1
New Jersey	314,600	12.0	16,571	198,300	[b] 181,729	132,871	5.1
New Mexico	357,200	13.6	576	135,390	[b] 134,814	222,386	8.5
New York	159,600	6.1	135,416	21,912	113,504	273,104	10.4
North Carolina			119		119	119	(c)
North Dakota							
Ohio			11,756		11,756	11,756	.4
Oklahoma			5,010		5,010	5,010	.2
Oregon			3,274		3,274	3,274	.1
Pennsylvania	159,900	6.1	24,099	55,391	[b] 31,292	128,608	4.9
Rhode Island			451		451	451	(c)
South Carolina			1,131		1,131	1,131	(c)
South Dakota							
Tennessee	93,700	3.6	13,679	5,759	7,920	101,620	3.9
Texas	69,272	2.6	106,396	15,157	91,239	160,511	6.1
Utah			3,216		3,216	3,216	.1
Vermont							
Virginia			10,094		10,094	10,094	.4
Washington	139,130	5.3	14,713	84,546	[b] 69,833	69,297	2.6
West Virginia			72		72	72	(c)
Wisconsin			1,049		1,049	1,049	(c)
Wyoming							
Canada			230		230	230	(c)

[a] Column (b) plus or minus (f).
[b] Awards to other States exceed the awards from other States.
[c] Less than .05 percent.

Source: National Science Foundation.

PART II

FEDERAL FUNDS FOR SCIENTIFIC AND TECHNICAL INFORMATION

agencies and activities

Since science moves forward on new increments of knowledge, the disclosure of research results is an essential part of the scientific process. And in the advancement of technology, new information on the state of the art is a prime necessity. However, a problem exists in effective information exchange in that the growth of science and technology has brought about an exponential growth in scientific and technical information. To aid in managing this problem scientific and technical information (STINFO) costs incurred by Federal agencies have been measured and reported by broad functions since 1960.

DEFINITIONS AND LIMITATIONS

- STINFO is defined as knowledge or data ing from the conduct of research and ment, or knowledge or data required ganizing, administering, or performing r and development. Such information wo used largely by scientists and engine gaged in R&D activities.
- STINFO definitions embrace various cat of activity, beginning with the editing an aration of scientific or technical repo publication and continuing into various mentation, collection, and information activities. Categories also include m and R&D work in the scientific informatio The latter category directly overlaps w R&D activities reported in part I of th vey. (See technical notes.)

THE CURRENT PERIOD

The table below depicts changes in the le

Federal obligations for s

Agency
Total
Department of Defense
Department of Health, Education, and Welfare
Department of Commerce
National Aeronautics and Space Administration
Library of Congress
National Science Foundation
Department of the Interior
Other agencies

gencies
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on new increments
of research results
ntific process. And
y, new information
a prime necessity.
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wth of science and
exponential growth
ormation. To aid in
ntific and technical
ncurred by Federal
ed and reported by
ctions since 1960.

DEFINITIONS AND LIMITATIONS

- STINFO is defined as knowledge or data resulting from the conduct of research and development, or knowledge or data required for organizing, administering, or performing research and development. Such information would be used largely by scientists and engineers engaged in R&D activities.
- STINFO definitions embrace various categories of activity, beginning with the editing and preparation of scientific or technical reports for publication and continuing into various documentation, collection, and information service activities. Categories also include meetings and R&D work in the scientific information area. The latter category directly overlaps with the R&D activities reported in part I of this survey. (See technical notes.)
- The data on STINFO in **Federal Funds** surveys cover only **direct** STINFO activities of Federal agencies, not STINFO activities conducted within R&D contracts and grants. Those extramural costs reported are for STINFO services contracted by Federal agencies (to administer a specialized information center, perform printing and distributing, do abstracting, etc.) or agency grants for special STINFO—connected studies.
- Despite this limitation, the broad measurement of direct costs on a functional basis can be useful as a guide to planning and forecasting.

THE CURRENT PERIOD

The table below depicts changes in the level of STINFO support in the current budget period.

Federal obligations for scientific and technical information, by agency

[Dollars in millions]

Agency	Actual			Estimates			
	1969	1970	Percent change 1969–70	1971	Percent change 1970–71	1972	Percent change 1971–72
Total	$362.5	$386.8	+6.7	$400.4	+3.5	$413.0	+3.2
Department of Defense	147.2	145.2	−1.4	147.3	+1.4	150.0	+1.8
Department of Health, Education, and Welfare	64.8	66.0	+1.9	72.4	+9.6	67.9	−6.2
Department of Commerce	52.1	60.3	+15.7	68.4	+13.4	71.9	+5.0
National Aeronautics and Space Administration	27.7	26.5	−4.3	26.9	+1.3	27.9	+3.7
Library of Congress	19.8	22.1	+11.6	23.0	+4.1	32.4	+41.1
National Science Foundation	12.3	14.9	+21.1	15.0	+1.2	12.6	−16.3
Department of the Interior	12.9	12.7	−1.6	13.6	+6.7	14.0	+3.2
Other agencies	25.7	39.1	+52.1	33.8	−13.6	36.3	+7.4

- Between 1969 and 1972 overall net growth in STINFO activities is expected to be 14 percent. The greatest annual increase occurred between 1969 and 1970.

- In 1970 Commerce and NSF were the only leading support agencies to register important relative increases, but the other agencies, taken as a group, substantially increased their STINFO activities.

- For Commerce the growth in 1970 largely arose from expansion in the Patent Office and the National Bureau of Standards; this expansion continued in 1971 in the case of the Patent Office.

- For NSF the growth in 1970 was primarily in the translation area, much of it supported by excess foreign currencies, and, secondarily, in the area of research and development on information services for individual scientists and for improvement of discipline-oriented information systems useful in applied research.

- Between 1970 and 1971 and between 1971 and 1972 growth in total STINFO obligations was moderate and was caused by increases on the part of most of the agencies.

- In 1972 the only relatively large increase is scheduled by the Library of Congress. This increase consists chiefly of a requested direct appropriation to the Library for the National Program for Acquisitions and Cataloging (NPAC), formerly appropriated to HEW under the Higher Education Act (Title IIC).

TRENDS

The following tabulation shows the chronology of STINFO

Trends in Federal obligations for scientific and technical

[Dollars in millions

Year	Total	Publication and distribution	Documen referenc informa servic
1960	$ 75.9	$ 37.0	$ 28
1961	91.6	48.7	29
1962	128.5	55.7	42
1963	164.5	67.7	64
1964	[a] 203.2	59.9	90
1965	224.7	68.2	102
1966	277.7	82.7	124
1967	324.4	87.1	152
1968	359.2	100.7	165
1969	362.5	96.0	170
1970	386.8	98.9	193
1971 (est.)	400.4	107.1	190
1972 (est.)	413.0	110.7	191

[a] Includes $17.2 million for management, which was reported separately from other categories in 1

- Between 1960 and 1972 Federal obligations for STINFO activities grew more than five times.

- During this period the chief dollar growth area has been that of documentation, reference, and information services; this category grew almost seven times and in 1972 is expected to account for 46 percent of the STINFO total.

- The share of publication and distribution will have fallen to an estimated 27 percent of the 1972 total (from 49 percent in 1960). Nonetheless, dollar growth in this category has been impressive.

TRENDS

The following tabulation shows the chronology of STINFO funding:

Trends in Federal obligations for scientific and technical information activities, by major categories

[Dollars in millions]

Year	Total	Publication and distribution	Documentation, reference and information services	Symposia and audiovisual media	R&D in information sciences, documentation and information systems, techniques and devices
1960	$ 75.9	$ 37.0	$ 28.4	$ 7.6	$ 2.9
1961	91.6	48.7	29.0	6.7	7.2
1962	128.5	55.7	42.4	17.0	13.3
1963	164.5	67.7	64.0	21.0	11.9
1964	[a] 203.2	59.9	90.8	22.7	12.6
1965	224.7	68.2	102.0	32.0	22.5
1966	277.7	82.7	124.6	22.5	48.0
1967	324.4	87.1	152.5	31.7	53.1
1968	359.2	100.7	165.6	34.1	58.8
1969	362.5	96.0	170.9	31.8	63.7
1970	386.8	98.9	193.1	32.6	62.1
1971 (est.)	400.4	107.1	190.5	35.3	67.5
1972 (est.)	413.0	110.7	191.2	36.7	74.4

[a] Includes $17.2 million for management, which was reported separately from other categories in 1964 only.

- Between 1960 and 1972 Federal obligations for STINFO activities grew more than five times.

- During this period the chief dollar growth area has been that of documentation, reference, and information services; this category grew almost seven times and in 1972 is expected to account for 46 percent of the STINFO total.

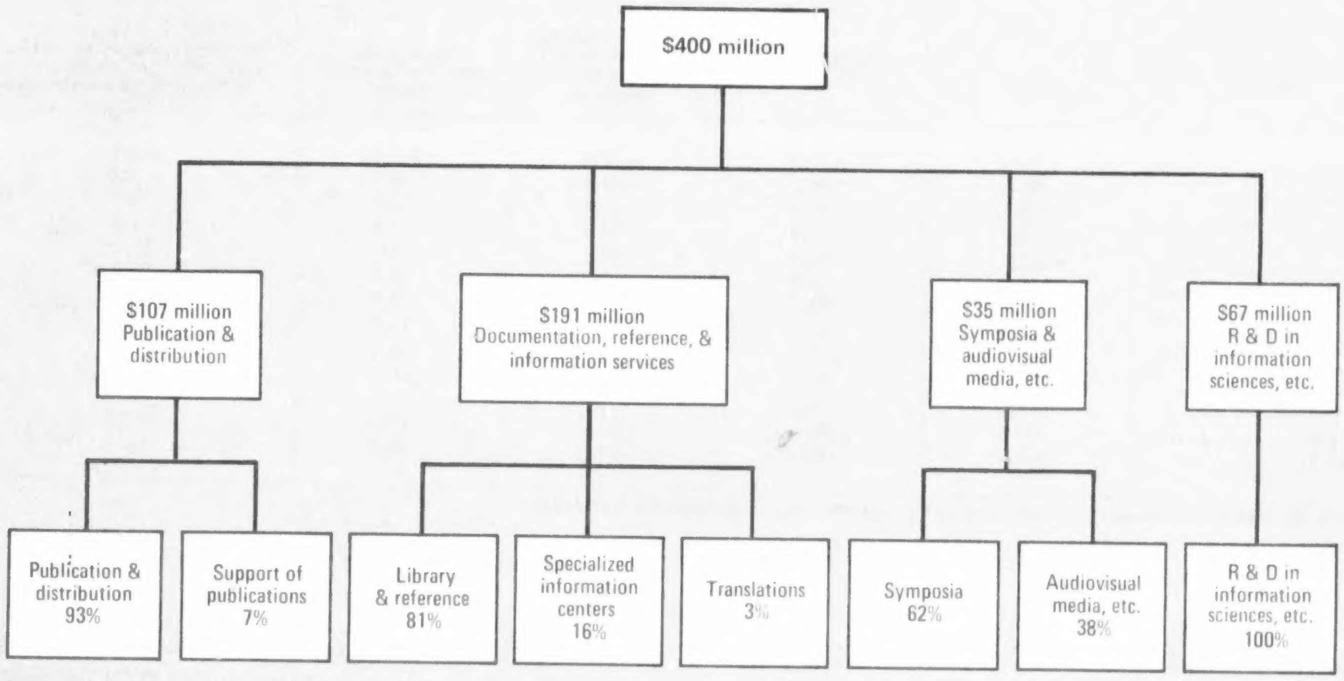
- The share of publication and distribution will have fallen to an estimated 27 percent of the 1972 total (from 49 percent in 1960). Nonetheless, dollar growth in this category has been impressive.

- Obligations for symposia and audiovisual media, 9 percent of the total in 1972, increased rapidly in the first half of the 1960's, then leveled off and are now growing moderately.

- Obligations for research and development in information, 18 percent of the 1972 total, show the most rapid rate of growth of any category between 1960 and 1972 with strong gains in the current budget period.

- Total STINFO obligations in 1972 are expected to be equal to 2½ percent of the total Federal R&D obligations.

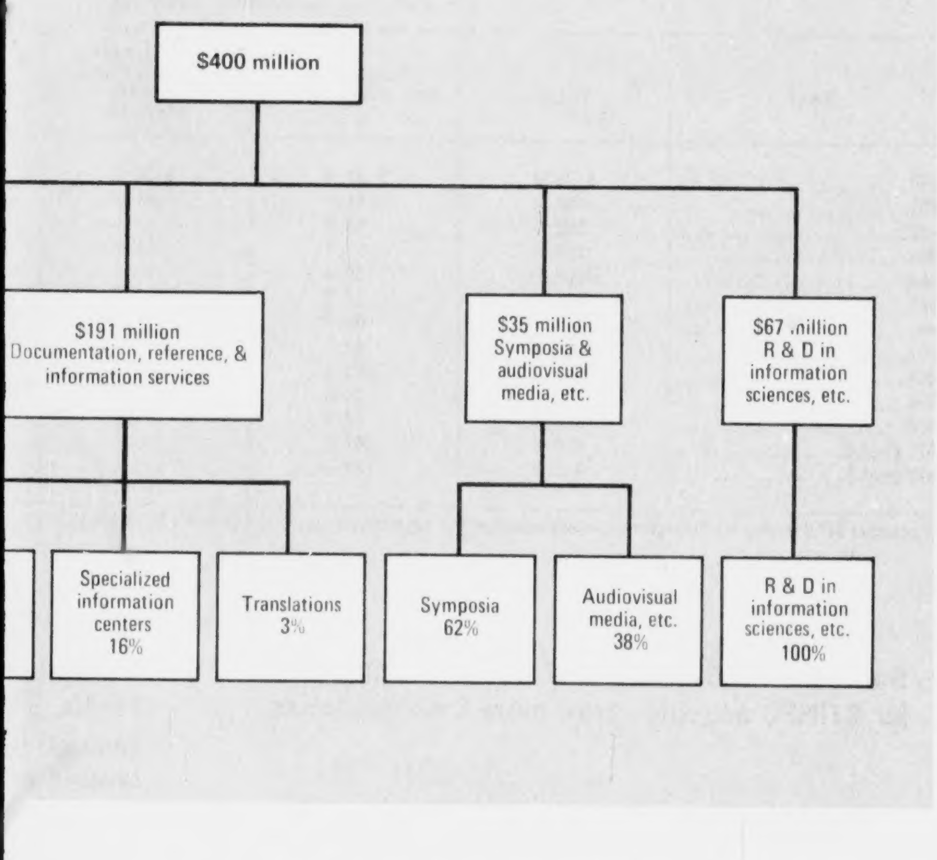
Federal obligations for scientific and technical information, by activity, FY 1971 (est.)


$400 million
$107 million Publication & distribution
$191 million Documentation, reference, & information services
$35 million Symposia & audiovisual media, etc.
$67 million R & D in information sciences, etc.
Publication & distribution 93%
Support of publications 7%
Library & reference 81%
Specialized information centers 16%
Translations 3%
Symposia 62%
Audiovisual media, etc. 38%
R & D in information sciences, etc. 100%

SOURCE: National Science Foundation

- Under each major category one subcategory represents most of the costs, and this pattern has been consistent throughout the 1960–72 period.
- For publication and distribution in 1971 more than 9 out of 10 dollars are allocated to direct costs of this function.
- For documentation, reference, and information services, library and reference accounts for four out of five dollars.
- Under symposia and audiovisual media, symposia and technical meetings use more than three out of five dollars.

nd technical information, by activity, FY 1971 (est.)


$400 million
$191 million Documentation, reference, & information services
$35 million Symposia & audiovisual media, etc.
$67 million R & D in information sciences, etc.
Specialized information centers 16%
Translations 3%
Symposia 62%
Audiovisual media, etc. 38%
R & D in information sciences, etc. 100%

- Under each major category one subcategory represents most of the costs, and this pattern has been consistent throughout the 1960–72 period.
- For publication and distribution in 1971 more than 9 out of 10 dollars are allocated to direct costs of this function.
- For documentation, reference, and information services, library and reference accounts for four out of five dollars.
- Under symposia and audiovisual media, symposia and technical meetings use more than three out of five dollars.

AGENCIES

- In 1971, although 25 agencies reported STINFO activities, the leading 11 account for more than 97 percent of the total dollars obligated.
- STINFO costs are not wholly comparable between agencies; some agencies have full reporting systems while others lack the means for determining all their STINFO costs. In the 1970–72 period, 8 agencies reported no STINFO obligations despite reporting R&D programs. In some cases agencies cannot identify STINFO costs; in others, all such costs are incurred within extramural R&D contracts and grants.
- The ratio of STINFO obligations to an agency's R&D obligations varies widely from agency to agency. Only in some cases do STINFO efforts bear a direct relationship to an agency's R&D work. They often represent independent services, such as those of the Patent Office within Commerce, the National Agricultural Library, or the STINFO part of the Library of Congress.
- DOD, HEW, and Commerce together account for almost three-fourths of the STINFO total in 1971.
- DOD is responsible for 37 percent of total Federal STINFO obligations in 1971, as much a reflection of the Army's full STINFO reporting systems as any other factor. (Although Navy and Air Force R&D programs are larger than those of the Army, their reported STINFO totals are lower.)
- HEW represents 18 percent of the Federal STINFO total in 1971; more than one-half of this effort is in the National Institutes of Health, much of it in the National Library of Medicine.
- The 17 percent accounted for by Commerce is chiefly centered in the Patent Office.

Distribution of Federal obligations for scientific and technical information, by agency and subdivision, FY 1971 (est.)

[Dollars in millions]

Agency and subdivision	Total obligations	Percent share
Total, all agencies	$400.4	100.0
Department of Defense	147.3	36.8
Department of the Army	69.8	17.4
Department of the Air Force	18.5	4.6
Department of the Navy	16.2	4.1
Defense Agencies	42.7	10.7
Department of Health, Education, and Welfare	72.4	18.1
National Institutes of Health	40.1	10.0
(National Library of Medicine)	(22.9)	(5.7)
Office of Education	17.6	4.4
Health Services and Mental Health Administration	8.9	2.2
Food and Drug Administration	5.4	1.3
Social Security Administration	.3	.1
Department of Commerce	68.4	17.1
Patent Office	52.6	13.1
National Bureau of Standards	11.2	2.8
National Oceanic and Atmospheric Administration	3.9	1.0
Other	.7	.2
National Aeronautics and Space Administration	26.9	6.7
Library of Congress	23.0	5.7
National Science Foundation	15.0	3.7
Department of the Interior	13.6	3.4
Geological Survey	9.5	2.4
Other	4.0	1.0
Department of Agriculture	10.7	2.7
National Agricultural Library	4.1	1.0
Agricultural Research Service	3.4	.8
Forest Service	2.7	.7
Other	.6	.1
Veterans Administration	6.1	1.5
Atomic Energy Commission	4.9	1.2
Department of Transportation	3.9	1.0
Other agencies	8.2	2.0

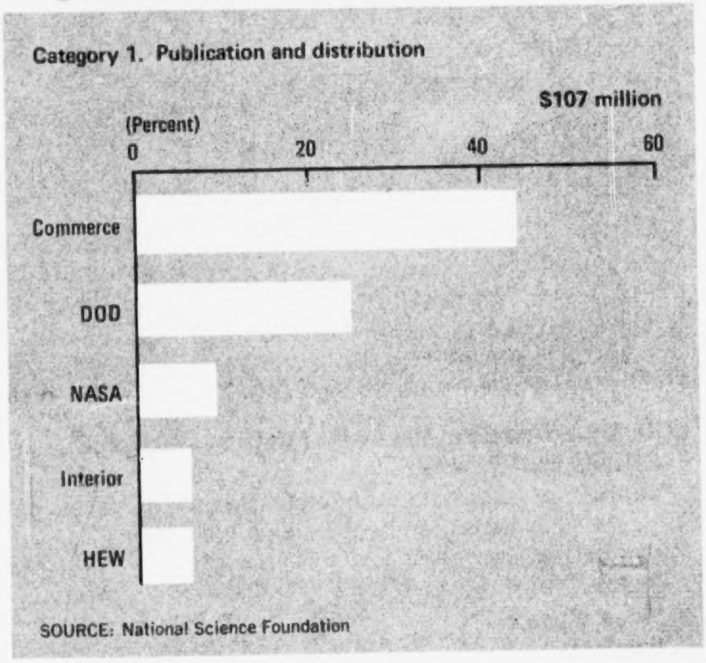
- NASA and AEC, despite large overall R&D programs, report comparatively small amounts for STINFO purposes because so much of their R&D work, including STINFO activities connected therewith, is performed extramurally.

ACTIVITIES

- Certain agencies tend to be predominant in certain categories of activity: DOD in all four major ones and HEW in three out of four while Commerce is predominant in only one.
- Often an agency will initiate STINFO activities in one category, or subcategory, and as its R&D programs grow, extend into the other categories. STINFO functions tend to flow back and forth between categories.

Key agency activities within each of the categories are listed below.

Share of selected agencies in major categories of STINFO activity, FY 1971 (est.)



SOURCE: National Science Foundation

COMMERCE: Patent Office
80,000 patents in FY 1971
Official Gazette, weekly abstracts of current patents

DOD: Departments of the Army, Navy, and Air Force
Journal articles
Technical reports
Technical notes
Technical memorandums
Contractors' and grantees' reports
Research reviews
Research bulletins
Research reports
Newsletters

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vision,

Percent share
100.0
36.8
17.4
4.6
4.1
10.7
18.1
10.0
(5.7)
4.4
2.2
1.3
.1
17.1
13.1
2.8
1.0
.2
6.7
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3.4
2.4
1.0
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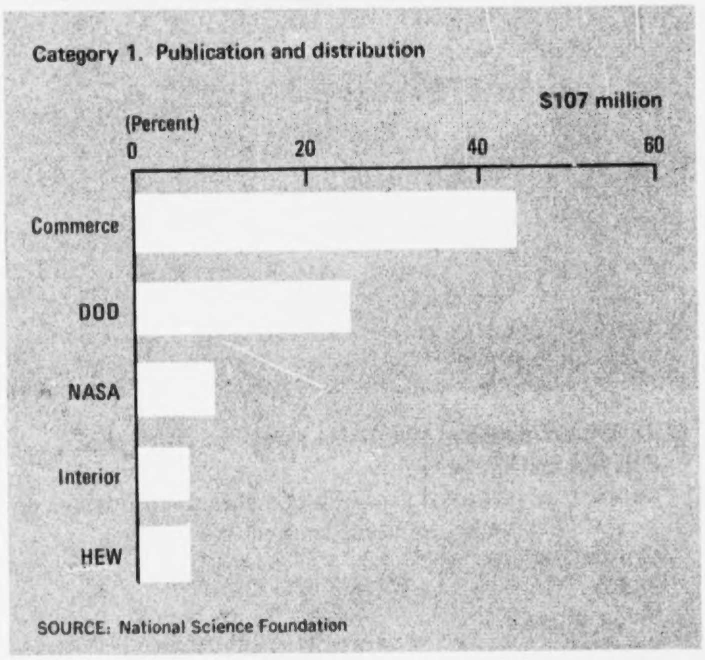


SOURCE: National Science Foundation

COMMERCE: Patent Office
    80,000 patents in FY 1971
    Official Gazette, weekly abstracts of current patents

DOD: Departments of the Army, Navy, and Air Force
    Journal articles
    Technical reports
    Technical notes
    Technical memorandums
    Contractors' and grantees' reports
    Research reviews
    Research bulletins
    Research reports
    Newsletters

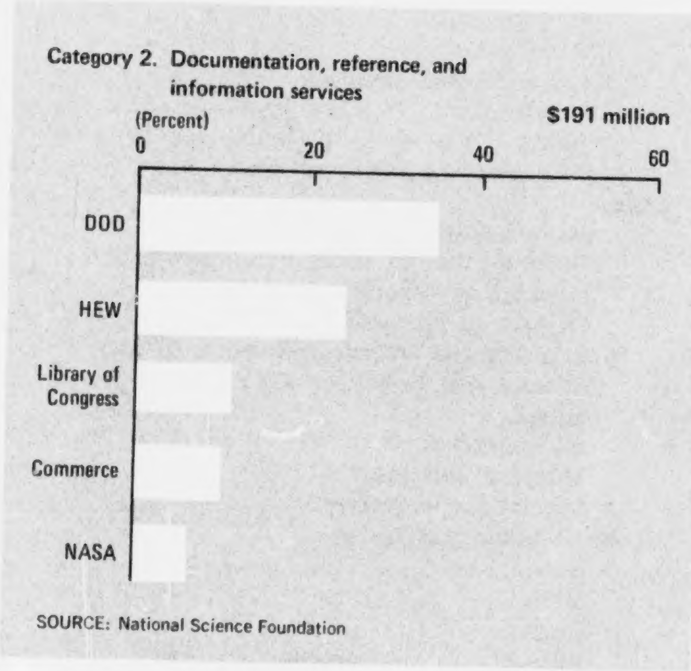
    Surveys
    Monographs
    Proceedings of symposia
    Handbooks
    Books
    Abstracts and bibliographies

NASA
    Journal articles
    Technical reports, notes, and memorandums
    Contractors' reports
    Conference proceedings
    Scientific and Technical Abstracts (STAR)
    International Aerospace Abstracts
    Indexes
    Bibliographies
    Technical reprints
    Special publications

INTERIOR: Geological Survey
    Books
    Maps
    Charts
    Atlases
    Research summaries
    Journal articles
    Bibliography of North American Geology
    Geophysical Abstracts

HEW: National Institutes of Health
    Journals of the institutes
    Journal articles
    Indexes
    Bibliographies
    Abstracts
    Monographs
    Books
    Reports
        Health Services and Mental Health Administration
    Scientific and technical papers
    Manuals
    Reviews and analyses
    Journal articles
        Office of Education
    Research in Education

AEC
    Technical reports
    Progress reports
    Summary reports
    Topical reports
    Journal articles
    Proceedings of meetings
    Nuclear Science Abstracts
    Progress reviews
    Books
    Monographs
    Bibliographies

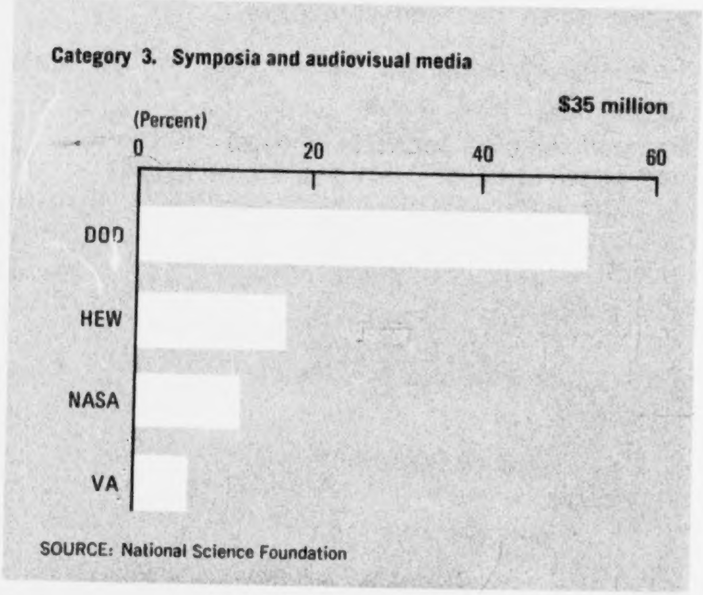


Category 2. Documentation, reference, and information services

SOURCE: National Science Foundation

DOD: Defense Agencies
  Defense Documentation Center
    Departments of the Army, Navy, and Air Force
  Libraries
  Specialized information centers
  Technical information analysis centers
  Translations
HEW: National Institutes of Health
  National Library of Medicine
  Specialized information centers
  Translations
    Office of Education
  ERIC system of 20 information clearinghouses in education research
    Food and Drug Administration
  Specialized information centers
LIBRARY OF CONGRESS
  Science and technology portion
COMMERCE: Patent Office
  Search Room
    National Bureau of Standards
  National Technical Information Service (NTIS)
  National Standard Reference Data System (NSRDS)
NASA
  STI documentation facility
  Headquarters and field center libraries
  Specialized information centers
  Regional dissemination centers
  Translations

NSF
  Support of abstracting, indexing, and other documentation services
USDA
  National Agricultural Library
VA
  Medical library services in 165 hospitals
AEC
  Abstract and review preparation
SMITHSONIAN
  Science Information Exchange



Category 3. Symposia and audiovisual media

SOURCE: National Science Foundation

DOD: Departments of the Army, Navy, and Air Force
  Science conferences
  Support of symposia with professional groups, scientific societies, and educational institutions
  Motion pictures
  Slides
  Video tapes
  Exhibits
HEW: National Institutes of Health
  Travel to scientific meetings, U.S. and abroad
  Support of conferences and symposia
  Support of international congresses
  Sound films on body functions, diseases, and treatment
  TV interviews
  Slides
  Photographs
  Exhibits
NASA
  Participation in and support of scientific symposia and technical meetings
VA
  Participation in seminars and symposia
  Films
  Slides

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NSF
- Support of abstracting, indexing, and other documentation services

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- Medical library services in 165 hospitals

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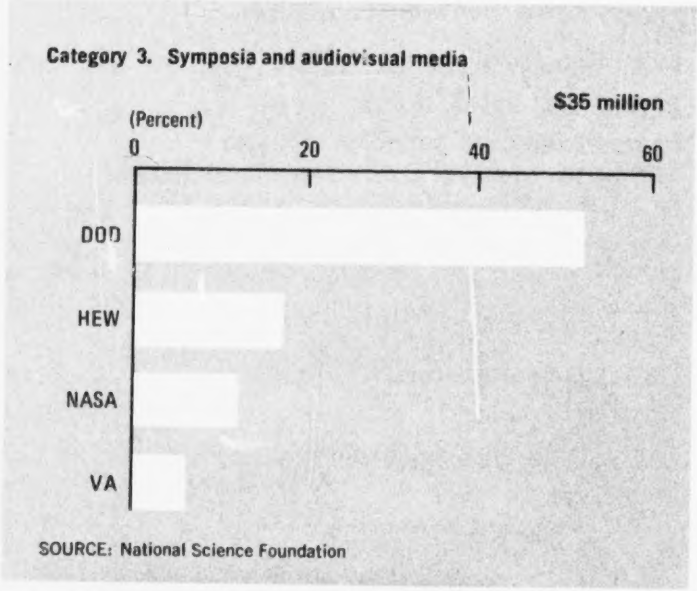
- Science Information Exchange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- Sound films on body functions, diseases, and treatment
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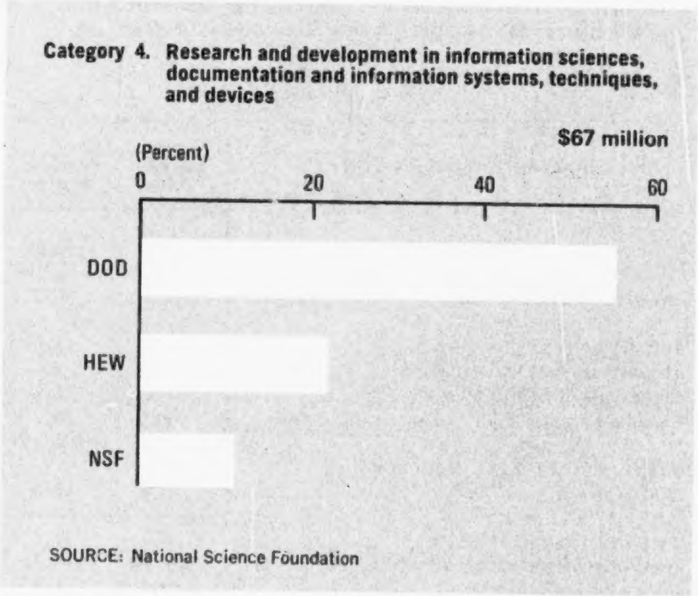
- Exhibits

NASA
- Participation in and support of scientific symposia and technical meetings

VA
- Participation in seminars and symposia
- Films
- Slides


Category 4. Research and development in information sciences, documentation and information systems, techniques, and devices

SOURCE: National Science Foundation

DOD: Defense Agencies (largely ARPA)

Departments of the Army, Navy, and Air Force
- R&D in advanced information systems
- Development of engineering data systems
- Support of development of discipline-based information systems
- Studies of man-computer relationships (Project Mack)
- Basic research in information sciences

HEW: National Institutes of Health (including NLM)
- Improvement of MEDLARS system at NLM
- Development of mechanized searching services in the institutes
- Development of computer time-sharing techniques

Health Services and Mental Health Administration
- Improvement of information systems

Office of Education
- Bibliographic automation of large library operations
- Development of an automated instructional materials-handling program

NSF
- Support of systems development:
  - discipline-oriented
  - university-centered
  - national systems planning
- Research support to:
  - research centers in information science
  - individual research projects

(For detailed data on this section see appendix tables D-1 through D-9.)

PART III

FEDERAL FUNDS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA

agencies and activities

General-purpose scientific data are those which, either separately or in combination with other information, can be applied to useful, general scientific purposes. Included as general-purpose scientific data are statistics, observations, specimens, readings, or other facts gathered from surveys, field investigations, or compilations of operating records, and similar types of information. Excluded are data used solely for internal administrative or operating purposes. General-purpose scientific data may pertain to the physical, life, mathematical, engineering, and environmental sciences as well as to the psychological and social sciences. These data are used by many organizations and individuals, including public agencies—Federal, State, and local—private foundations or associations, research investigators, and the general public.

THE CURRENT PERIOD

Federal obligations for collection of general-purp
as follows:

Federal obligations for collection of genera

[Dollars in mi

Agency	196
Total	$3
Department of Commerce	1
Department of Defense	
Department of the Interior	
Department of Agriculture	
Other agencies	

- Obligations for general-purpose scientific data were reported by 11 departments and 10 independent agencies.
- Unlike Federal R&D programs, those involving general-purpose scientific data collection have been predominantly carried out by Federal personnel. In the current (1970–72) period 97 percent of the work in such data collection is expected to be performed intramurally whereas only 25 percent of the Federal R&D total is directed to intramural performance.
- More than four-fifths of total obligations for the current years were reported by four agencies—Commerce, DOD, Interior, and USDA.
- However, the largest effort, that of Commerce, reflects a declining share in this period—from 57 percent of the total in 1970 to 50 percent in 1972.

THE CURRENT PERIOD

Federal obligations for collection of general-purpose scientific data in the current period are shown as follows:

Federal obligations for collection of general-purpose scientific data, by agency

[Dollars in millions]

Agency	Actual			Estimates			
	1969	1970	Percent change 1969–70	1971	Percent change 1970–71	1972	Percent change 1971–72
Total	$385	$550	+42.9	$526	−4.4	$537	+2.1
Department of Commerce	181	311	+71.8	274	−12.0	266	−2.9
Department of Defense	57	67	+17.5	64	−5.2	69	+8.3
Department of the Interior	48	51	+6.3	54	+6.3	56	+4.5
Department of Agriculture	35	42	+20.0	44	+4.9	44	−0.2
Other agencies	63	79	+25.4	90	+14.6	101	+12.6

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- However, the largest effort, that of Commerce, reflects a declining share in this period—from 57 percent of the total in 1970 to 50 percent in 1972.
- From 1969 to 1970 Commerce obligations rose more than 70 percent and then declined in 1971 and 1972. This fluctuation is due primarily to costs of the 1970 decennial census of population and housing, conducted by the Bureau of the Census.
- The funding fluctuations for Commerce would have even been greater except for the substantial increases in obligations on the part of NOAA in 1971 and 1972.
- DOD is the agency reporting the second largest obligations. Year-to-year variations in funds for data-collection equipment, especially ships for the Navy, are the primary cause of shifting levels for DOD when they occur.

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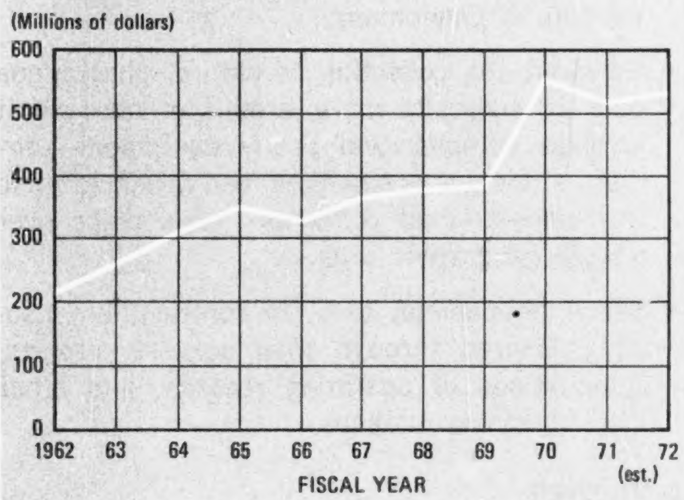
Trends in Federal obligations for collection of general-purpose scientific data, FY 1962-1972 (est.)



Year	Obligations (Millions of dollars)	Annual percent change
1962	$220	--
1963	268	22
1964	309	15
1965	343	11
1966	325	–5
1967	368	13
1968	380	3
1969	385	1
1970	550	43
1971 (est.)	526	–4
1972 (est.)	537	2

SOURCE: National Science Foundation

TRENDS

- Total data collection obligations multiplied about $2\frac{1}{2}$ times in the 1962–72 decade,[1] compared with slightly more than $1\frac{1}{2}$ times for R&D obligations.
- Between 1962 and 1965, obligations registered an average annual growth rate of 16 percent, but between 1965 and 1969 this increase slowed to 3 percent. In 1970, the increase was 43 percent and it was influenced chiefly by costs of the 1970 decennial census. In 1971 and 1972 changes were slight.
- Despite the substantial drop in the Census Bureau's 1971 and 1972 obligations as a result of completion of the decennial census, the overall Federal totals estimated for 1971 and 1972 are almost as high as 1970. Increased support by other agency subdivisions, primarily NOAA within Commerce, the Bureau of Labor Statistics within Labor, the Geological Survey within Interior, and the Federal Aviation Administration within DOT is expected to account for these levels.

AGENCIES

- Of the four leading agencies, DOD has shown the largest relative increase during the 1962–72 decade, having more than quadrupled its total. In comparison, Commerce obligations nearly tripled, while the Interior total almost doubled. USDA had the smallest absolute and relative increase, its data collection obligations rising by about one-half between 1962 and 1972.
- Commerce has had the largest program throughout the 1962–72 period. From 1962 to 1968, this agency accounted for approximately 40 percent of the total. In 1964 its share increased to 47 percent, and then to 57 percent in 1970. The share is expected to be about 50 percent in 1971 and 1972.
- The newly organized NOAA is expected to account for four-fifths of the Commerce total in 1972, and 40 percent of the all-agency total. Its chief component is the former Environmental Science Services Administration (ESSA).
- NOAA collects natural phenomena data used for weather forecasting, flood and navigation

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[1] The first year in which obligational data were reported by agencies on the collection of general-purpose scientific data was 1962.

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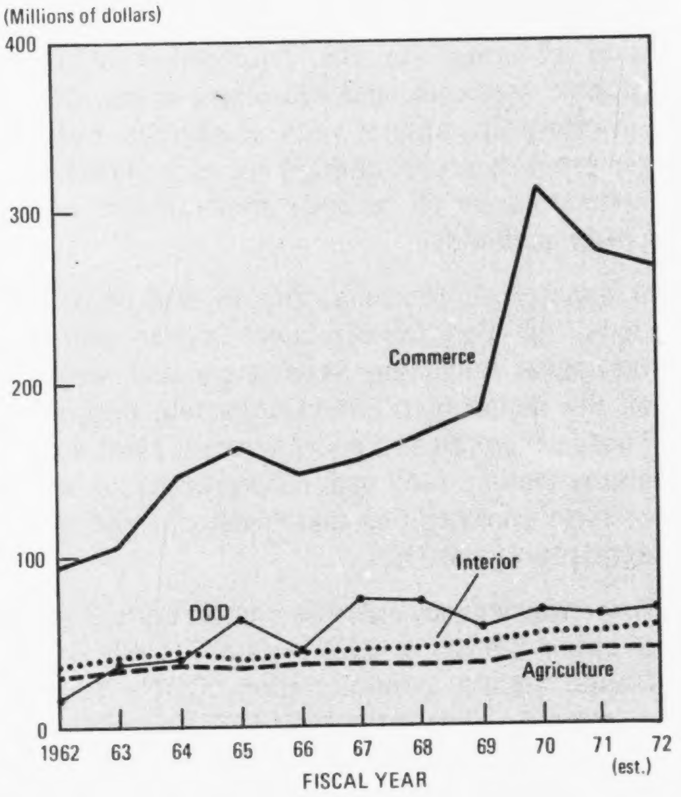
- The newly organized NOAA is expected to account for four-fifths of the Commerce total in 1972, and 40 percent of the all-agency total. Its chief component is the former Environmental Science Services Administration (ESSA).
- NOAA collects natural phenomena data used for weather forecasting, flood and navigation control, pollution checks, mapping, and other activities.

Federal obligations for collection of general-purpose scientific data, by agency, FY 1962-1972 (est.)



SOURCE: National Science Foundation

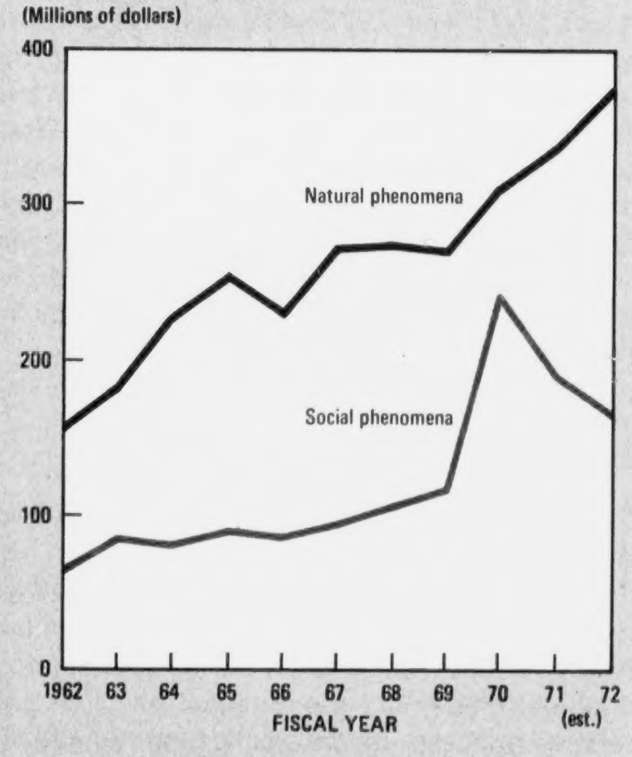
- The Census Bureau accounts for the remaining Commerce obligations. Census gathers data on industry, agriculture, transportation, construction and housing, population, and other social phenomena.
- Since 1965 DOD has reported the second largest data collection effort. The Navy accounts for more than 90 percent of the DOD total, and the Army Corps of Engineers makes up the remainder.
- Navy data collection activities cover hydrographic, oceanographic, and aeronautical information collected by ships, airplanes, satellites, and buoys.

- For Interior, currently the third agency in size of effort, approximately 90 percent of the obligations are represented by one subdivision, the Geological Survey. This subdivision's data collection efforts relate to natural phenomena data covering (1) the preparation of topographic, geologic, and hydrologic maps, (2) an inventory of national water resources and water problem areas, and (3) the classification of Federal lands as to their mineral and waterpower potential.
- Within USDA, fourth agency in size of obligations, the Soil Conservation Service and the Statistical Reporting Service conduct virtually all the department's data collection programs. These cover soil and snow surveys, plant adaptability testing, land use, crop production, value of farm commodities and livestock, and other agricultural statistics.
- Four other agency subdivisions (Labor's Bureau of Labor Statistics, HEW's Health Services and Mental Health Administration, DOT's Federal Aviation Administration and U.S. Coast Guard) support important scientific data collection efforts. Their combined share of the Federal total rose from 9 percent in 1970 to an estimated 13 percent for 1972.

TYPES OF DATA

- About 70 percent of the Federal data collection effort has been in the natural phenomena area throughout the 1962–72 decade, with the exception of 1970 and 1971.
- Social phenomena has accounted for the remaining portion. The share reached high points of 44 percent and 36 percent, respectively, in 1970 and 1971 as a result of costs of programs carried out by the Bureau of the Census, all of which are classified as social phenomena.

Federal obligations for collection of general-purpose scientific data, by type of data, FY 1962-1972 (est.)



SOURCE: National Science Foundation

- Natural phenomena data are concerned with the engineering, environmental, life, mathematical, physical, and psychological sciences. Examples of activities under this heading are precipitation and other weather phenomena studies, stream flow and temperature measurements, soil and snowpack observations, topographic and oceanographic mapping work.
- Social phenomena data are of a socioeconomic nature and include population and demographic statistics, employment characteristics, industrial and agricultural production data, or crime statistics.

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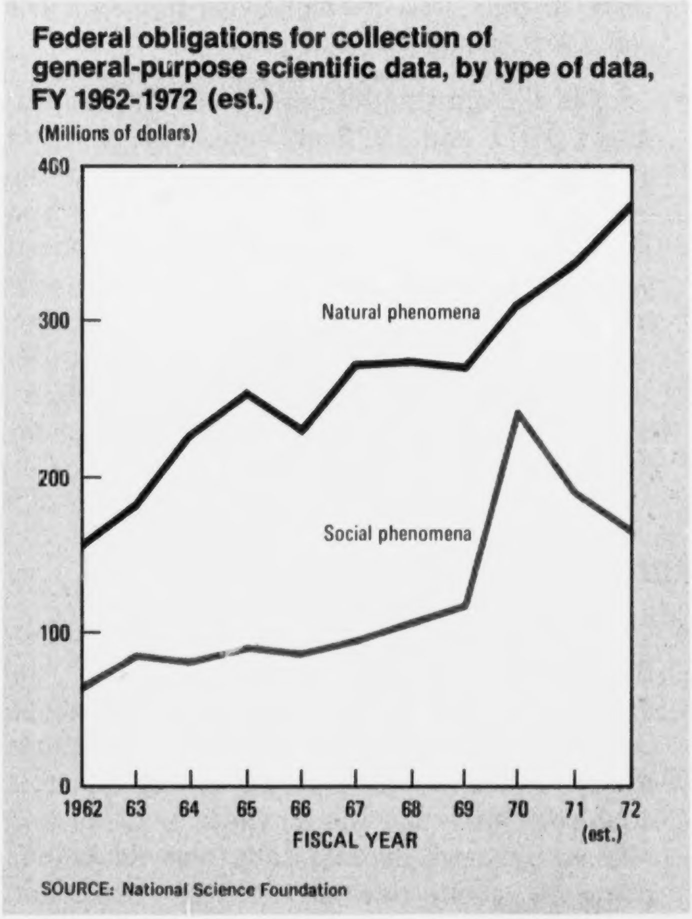

Federal obligations for collection of general-purpose scientific data, by type of data, FY 1962-1972 (est.)

(Millions of dollars)

SOURCE: National Science Foundation

- Natural phenomena data are concerned with the engineering, environmental, life, mathematical, physical, and psychological sciences. Examples of activities under this heading are precipitation and other weather phenomena studies, stream flow and temperature measurements, soil and snowpack observations, topographic and oceanographic mapping work.
- Social phenomena data are of a socioeconomic nature and include population and demographic statistics, employment characteristics, industrial and agricultural production data, or crime statistics.
- Many more agencies report obligations for social phenomena data than for natural phenomena. Nineteen agencies reported funds for social phenomena in 1971, compared with 9 for natural phenomena.
- However, the collection of natural phenomena data is generally more expensive because it involves complex and costly equipment—aircraft, ships, earth satellites, and oceanographic instruments—and collection takes place over a wide geographic area.
- Social phenomena data, in contrast, are usually gathered through mail surveys, reports, compilations of operating records, and other less expensive methods.

ACTIVITIES

- Throughout the 1962–72 decade, the distribution of data-collection funds by category of activity[2] has changed relatively little.
- From 58 percent to 72 percent of the obligation total has gone for category 1 (gathering, processing, and collating) activities. The 1970 high primarily reflects the increased data collection activities for the 1970 decennial census.
- Category 4 (equipment) in the current period accounts for the second highest share of total funds (11 percent to 12 percent), but its share has dropped since 1967 and 1968 when it was 18 percent to 19 percent. This change is due largely to reductions in equipment funding by NOAA (formerly ESSA).

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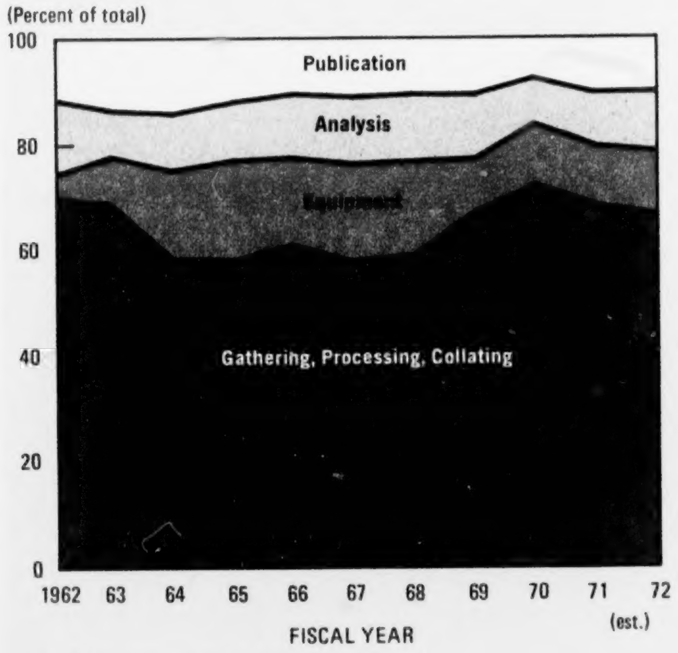
[2] The four categories of activity cover the processes involved in obtaining the data and making them available to the various users. Data are first gathered, processed, and collated (category 1) before any analysis (category 2) can be made. Then the data may be published (category 3) for use by any of the various organizations or individuals who have need for them. Category 4 (equipment) covers the procurement or rental of equipment used in the gathering, processing, or collating of the data. The four categories are not involved in every agency's general-purpose scientific data collection activities. Some agencies, particularly those that concentrate on social phenomena data, do not use equipment in the gathering of the data, and others may make no analysis of the collected data.

Federal obligations for collection of general-purpose scientific data, by activity, FY 1962-1972 (est.)



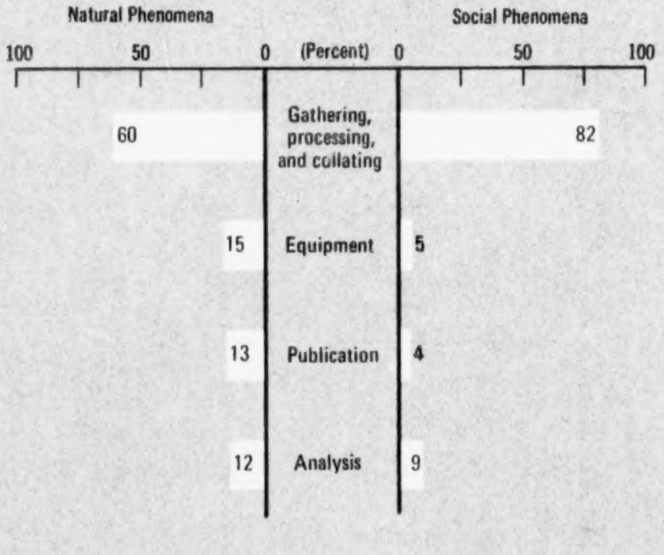
SOURCE: National Science Foundation

- Equipment accounts for a greater share of funds under natural phenomena than social phenomena because of the need for expensive data collection apparatus such as ships, satellites, aircraft, and specialized instrumentation in the measuring of natural phenomena.

- Conversely, the category of gathering, processing, and collating statistics accounts for a greater share of social phenomena funds than of natural phenomena funds.

- Analysis (category 2) is currently third in size of total funding after equipment. The share of social phenomena funds allotted to analysis in 1970 and 1971 was smaller than in previous years, not because of decreased funding but because the gathering, processing, and collating occasioned by the decennial census increased the share for category 1 relative to other categories.

Federal obligations for collection of general-purpose scientific data, by activity and type of data, FY 1971 (est.)

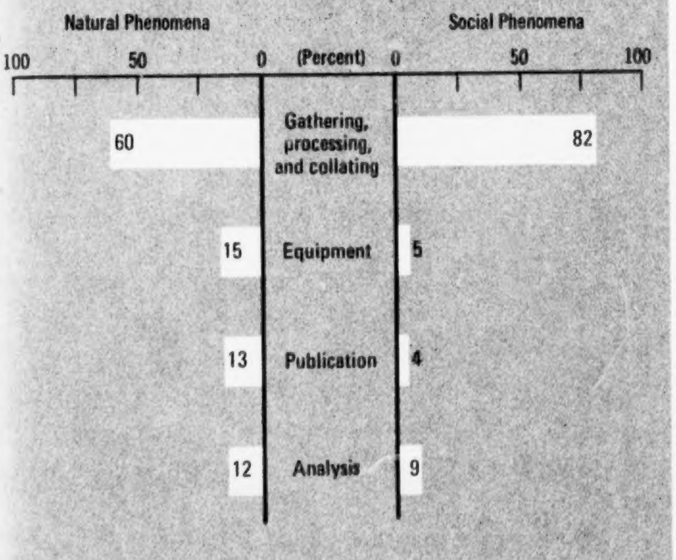


SOURCE: National Science Foundation

- In 1971 publication (category 3) is the fourth in size of funding. Approximately 88 percent of the support for this category was provided by three agency subdivisions—NOAA, the Navy, and the Geological Survey—all of whose programs dealt with natural phenomena.

(For detailed data on this section see appendix tables E-1 through E-6.)

Federal obligations for collection of general-purpose scientific data, by activity and type of data, FY 1971 (est.)



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(For detailed data on this section see appendix tables E-1 through E-6.)

APPENDIXES

A. Technical Notes

B. Federally Funded Research and Development Centers

C. Statistical Tables, Part I

D. Statistical Tables, Part II

E. Statistical Tables, Part III

APPENDIX A

technical notes

These technical notes deal with scope and method, adjustments in data, definitions, changes in reporting, limitations of data, relation to other reports, and sources. The definitions and reporting requirements are unchanged from the preceding issue of the **Federal Funds** series.

SCOPE AND METHOD

This report is organized in three parts: part I is concerned with Federal funds for research, development, and R&D plant; part II reports on funds for activities connected with the collection and dissemination of scientific and technical information; and part III covers funds obligated for the collection of general-purpose scientific data.

The statistical data contained in this report were received from Federal agencies during March-May 1971 in response to a questionnaire formulated and distributed by the Foundation in December 1970. The Foundation's staff assisted the agency respondents in the interpretation of the survey's concepts and definitions and evaluated the responses for clarity and consistency. The ultimate decisions on classification of activities and the amounts reported, however, were made by the responding agencies. The narrative text, on the other hand, represents the Foundation's interpretation of the statistical and descriptive material submitted by the respondents.

With the exception of AEC and NASA, the data received from the agencies were in terms of obligations and expenditures incurred, or expected to be incurred, regardless of when the funds were appropriated or whether they were identified in the respondent's budget specifically for scientific activities. AEC's data for research and development were reported in terms of accrued costs, while the R&D plant transactions were reported in terms of obligations. NASA reported its 1970 transactions in terms of obligations incurred, while the 1971 and 1972 transactions are in terms of the "budget plan," which approximates obligations.

The data appearing in this report reconcile with data included in "Special Analysis R, Federal Research and Development Programs," in **The Budget of the United States Government, Fiscal Year 1972.** This report is, however, a later and more detailed analysis of the science portion of the budget presented by the President to Congress in January 1971. (See Relation to Other Reports, p. 73 for further explanation.) The data for 1972 appearing in this report do not reflect subsequent appropriation and apportionment action that have affected **The Budget, 1972.** The actual effects of these subsequent appropriations and reprogramming actions on 1972 obligations will be reflected in next year's report.

ADJUSTMENTS IN THE DATA

In general, obligations for the three scientific activities covered in this report were separately identified by the responding departments and independent agencies. However, two departments with large R&D programs and many extramural contracts—DOD and HEW (NIH)—had difficulty in identifying scientific and technical information activities separately from research and development. This has resulted in reporting by these agencies of the same obligations both as research and development and as scientific and technical information.

Hence, approximately one-third of total obligations for scientific and technical information (STINFO) activities

PPENDIX A

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Hence, approximately one-third of total obligations for scientific and technical information (STINFO) activities (in categories 1, 2, and 3) were also reported in 1970-72 as research and development. These funds amounted to 0.8 percent of the total Federal obligations for research and development. Since research and development in information sciences, documentation and information systems, and techniques and devices (STINFO category 4) is by definition an R&D activity, these functions are properly included in part I by all reporting agencies (appendix table A-1).

TABLE A-1. OBLIGATIONS REPORTED BOTH FOR CATEGORIES 1-3 OF SCIENTIFIC AND TECHNICAL INFORMATION[a] AND FOR RESEARCH AND DEVELOPMENT

[Millions of dollars]

Agency	Actual	Estimates	
	1970	1971	1972
Total	$123.4	$121.4	$120.4
Department of Defense	112.1	109.8	108.8
Department of the Army	67.4	68.4	68.2
Department of the Navy	13.5	13.6	14.1
Department of the Air Force	16.9	15.3	13.7
Defense Agencies	14.3	12.5	12.8
Department of Health, Education, and Welfare—National Institutes of Health	11.3	11.6	11.6

[a] The categories are (1) publication and distribution; (2) documentation, reference, and information services; and (3) symposia and audiovisual media.

In order to obtain data representing only research and development, appendix table A-2 eliminates the overlaps of funding and shows the net totals of obligations for support of the three scientific activities covered in this report.

TABLE A-2. ADJUSTED OBLIGATIONS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT; SCIENTIFIC AND TECHNICAL INFORMATION; AND COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA

[Millions of dollars]

Activity	Actual	Estimates	
	1970	1971	1972
Adjusted total, three scientific activities	$16,605.5	$16,783.6	$18,004.8
1. Research, development, and R&D plant, adjusted total	15,730.9	15,924.9	17,129.4
Research, development, and R&D plant (as reported)	15,854.3	16,046.3	17,249.4
Scientific and technical information (categories 1-3) also reported as R&D	−123.4	−121.4	−120.4
2. Scientific and technical information, adjusted total	324.7	332.9	338.6
Scientific and technical information (as reported)	386.8	400.4	413.0
R&D included in information activities (category 4)	−62.1	−67.5	−74.4
3. Collection of general-purpose scientific data, total (as reported)	549.9	525.8	536.8

NOTE: Detail may not add to totals because of rounding.

DEFINITIONS

The definitions are presented to correspond with the three parts of the report. Some definitions in part I are also applicable to parts II and III. The definitions are essentially unchanged from prior issues of the **Federal Funds** series.

Part I. Research, Development, and R&D Plant

(1) RESEARCH, DEVELOPMENT, AND R&D PLANT

This term includes all direct, indirect, incidental, or related costs resulting from or necessary to research, development, and R&D plant, regardless of whether the research and development are performed by a Federal agency (intramural) or performed by private individuals and organizations under grant or contract (extramural). Research and development exclude routine product testing, quality control, mapping and surveys, collection of general-purpose statistics, experimental production, and activities concerned primarily with the dissemination of scientific information and the training of scientific manpower.

a. **Research** is systematic, intensive study directed toward fuller scientific knowledge or understanding of the subject studied. Research may be classified as either basic or applied.

In **basic research** the investigator is concerned primarily with gaining a fuller knowledge or understanding of the subject under study.

In **applied research** the investigator is primarily interested in a practical use of the knowledge or understanding for the purpose of meeting a recognized need.

b. **Development** is systematic use of the knowledge and understanding gained from research, directed toward the production of useful materials, devices, systems, or methods, including design and development of prototypes and processes. It excludes quality control, routine product testing, and production.

c. **R&D plant** (or R&D facilities and fixed equipment, such as reactors, wind tunnels, and radio telescopes) includes acquisition of, construction of, major repairs to, or alterations in structures, works, equipment, facilities, or land, for use in R&D activities at Federal or non-Federal installations. Excluded from the R&D plant category are expendable equipment and office furniture and equipment. Obligations for foreign R&D plant are limited to Federal funds for facilities located abroad and used in support of foreign research and development.

(2) OBLIGATIONS AND EXPENDITURES

a. **Obligations** represent the amounts for orders placed, contracts awarded, services received, and similar transactions during a given period, regardless of when the funds were appropriated and when future payment of money is required.

b. **Expenditures** represent the amounts for checks issued and cash payments made during a given period, regardless of when the funds were appropriated.

For those agencies operating on a cost-type budget, accrued expenditures and costs are reported instead of obligations. Accrued expenditures represent all costs accrued during the reporting period except those subject to reimbursement from other agencies. The information on expenditures represents net cash payments for research, development, and R&D plant, exclusive of any receipts of the agency for those purposes.

The obligations and expenditures reported cover all transactions from all funds available to the agency from direct appropriations, trust funds or special account receipts, corporate income, or other sources, including funds appropriated to the President that an agency received or expects to receive. The amounts reported for each year reflect obligations and expenditures for that year regardless of when the funds were originally authorized or received and regardless of whether they were appropriated, received, or identified in the agency's budget specifically for research, development, or R&D plant.

An agency making a transfer of funds to another agency includes such transfers in its report of obligations and expenditures. The receiving agency does not report, for purposes of this survey, on funds transferred to it from another agency. Similarly, a subdivision of an agency that transfers funds to another subdivision within its own agency reports such obligations or expenditures.

Obligations and expenditures for work performed in foreign countries include funds directly available to Federal agencies and special foreign currencies separately appropriated. (The latter currencies are derived largely from provisions of Public Law 480, 1954, as amended.)

(3) COST COVERAGE

Funds reported for research and development reflect full costs. In addition to costs of specific R&D projects, the applicable overhead costs are also included. The amounts reported include the costs of planning and administering R&D programs, laboratory overhead, pay of military personnel, and departmental administration.

(4) FISCAL YEAR

The fiscal year is the Government accounting period beginning July 1 of one year and ending June 30 of the following calendar year; thus, fiscal year 1972 began on July 1, 1971, and will end June 30, 1972.

(5) AGENCY

An agency is an organization of the Federal Government whose principal executive officer reports to the President. The one exception is the Library of Congress, which is also included in this survey. The term **subdivision** refers to any major organizational unit of a reporting agency, such as a bureau, division, office, or service.

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(6) PERFORMERS

Performers are either intramural organizations accomplishing operating functions or extramural organizations or persons receiving support or providing services as a result of a contract or grant.

a. **Intramural performers** are the agencies of the Federal Government. Their work is carried on directly by their own personnel. Obligations reported under this category are for activities performed or to be performed by the reporting agency itself, or are funds that this agency transfers to another Federal agency to have its activities performed for it. However, the ultimate performer must be a Federal agency. If the ultimate performer is **not** a Federal agency, the funds so transferred are reported by the transferring agency under the appropriate extramural performer (industrial firms, universities and colleges, other nonprofit institutions). Intramural performance includes the costs of supplies and equipment, essentially of an "off-the-shelf" nature, which are procured for use in intramural research and development. Also included as part of the intramural performance total are the expenses of Federal personnel engaged in planning and administering intramural and extramural R&D programs.

b. **Extramural performers** are all organizations outside the Federal complex which perform with Federal funds under contract or grant. Only costs of actual extramural performance are reported. The costs of extramurally procured "off-the-shelf" supplies and equipment required to support intramural research and development are reported as part of the costs of intramural performance. For example, the purchase from an extramural source of a launch vehicle which is operational, i.e., has gone beyond the development or prototype stage, and which is used in an intramural Federal installation for the performance of research and development, is reported as part of the cost of intramural research and development. Extramural performers are identified as follows:

(i) **Industrial firms** are those organizations that may legally distribute net earnings to individuals or to other organizations.

(ii) **Universities and colleges** are institutions engaged primarily in providing resident instruction for at least a 2-year program above the secondary school level. Included are colleges of liberal arts; schools of arts and sciences; professional schools, such as in engineering and medicine, including affiliated hospitals; associated research institutes; and agricultural experiment stations.

(iii) **Other nonprofit institutions** are private organizations other than educational institutions, no part of whose net earnings inure to the benefit of a private stockholder or individual, and other private organizations organized for the exclusive purpose of turning over their entire net earnings to such nonprofit organizations.

(iv) **Federally Funded Research and Development Centers** are R&D-performing organizations exclusively or substantially financed by the Federal Government that are supported by the Federal Government either to meet a particular R&D objective or, in some instances, to provide major facilities at universities for research and associated training purposes. Each center is administered by one of the above extramural performers.

In general, all of the following qualification criteria are met by an institutional unit before it is included in the Federally Funded Research and Development Centers category: **1)** its primary activities include one or more of the following: basic research, applied research, development, or management of research and development (specifically excluded are organizations engaged primarily in routine quality control and testing, routine service activities, production, mapping and surveys, and information dissemination); **2)** it is a separate operational unit within the parent organization or is organized as a separately incorporated organization; **3)** it performs actual research and development or R&D management either upon direct request of the Federal Government or under a broad charter from the Federal Government, but in either case under the direct monitorship of the Federal Government; **4)** it receives its major financial support (70 percent or more) from the Federal Government, usually from one agency; **5)** it has or is expected to have a long-term relationship with its sponsoring agency (about 5 years or more), as evidenced by specific obligations assumed by it and the agency; **6)** most or all of its facilities are owned or are funded for in the contract with the Federal Government; and **7)** it has an average annual budget (operating and capital equipment) of at least $500,000.

(v) **Foreign performers** are confined to foreign citizens, organizations, or governments, as well as international organizations, such as NATO, UNESCO, WHO, performing work abroad financed by the Federal Government. Excluded are payments to U.S. agencies, organizations, or citizens performing research and development abroad for the Federal Government. (The survey objectives do not seek information on "offshore" payment.) Also excluded are payments to foreign scientists performing in the United States.

(vi) **Other performers** include all other miscellaneous performers not covered in the foregoing categories, e.g., State and local governments and private individuals.

(7) FIELDS OF SCIENCE

The fields of science in this survey are divided into eight broad field categories, most of them consisting of a number of detailed fields. The broad fields are life sciences, psychology, physical sciences, environmental sciences, mathematics, engineering, social sciences, and other sciences not elsewhere classified. The following listing presents the fields grouped under each of the broad fields, together with illustrative disciplines.

a. **Life sciences** consist of the biological, clinical medical, other medical sciences, and life sciences not elsewhere classified.

Life sciences include the following disciplines:

Anatomy; animal sciences; bacteriology; biochemistry; biogeography; biological oceanography; biophysics; dentistry; ecology; embryology; entomology; evolutionary biology; genetics; immunology; internal medicine; microbiology; neurology; nutrition and metabolism; opthalmology; parasitology; pathology; pharmacology; pharmacy; physical anthropology; physical medicine and rehabilitation; physiology; plant sciences; podiatry; preventive medicine and public health; psychiatry; radiobiology; radiology; surgery; systematics; veterinary medicine.

Research in some of these disciplines may be classed as biological, clinical medical, or other medical, depending upon the nature of the particular project.

Biological sciences are those which, apart from the clinical medical and other medical sciences as defined below, deal with the origin, development, structure, function, and interaction of living things.

Clinical medical sciences are concerned with the study of the pathogenesis, diagnosis, or therapy of a particular disease or abnormal condition in living human subjects under controlled conditions.

Other medical sciences are concerned with studies of the causes, effects, prevention, or control of abnormal conditions in man or in his environment as they relate to health, except for the clinical aspects as defined above.

Life sciences, nec[1]

b. **PSYCHOLOGY** deals with behavior, mental processes, and individual and group characteristics and abilities. Psychology is divided into three categories: biological aspects, social aspects, and psychological sciences not elsewhere classified. Examples of the disciplines under each of these fields are:

Biological aspects:

experimental psychology; animal behavior; clinical psychology; comparative psychology; ethology.

Social aspects:

social psychology; educational, personnel, vocational psychology and testing; industrial and engineering psychology; development and personality.

Psychological sciences, nec[1]

c. **PHYSICAL SCIENCES** are concerned with the understanding of the material universe and its phenomena. They comprise the fields of astronomy, chemistry, physics, and physical sciences not elsewhere classified. Examples of the disciplines under each of these fields are:

Astronomy:

laboratory astrophysics; optical astronomy; radio astronomy; theoretical astrophysics; X-ray, Gamma-ray, neutrino astronomy.

Chemistry:

inorganic; organo-metallic; organic; physical.

Physics:

acoustics; atomic and molecular; condensed matter; elementary particles; nuclear structure; optics; plasma.

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Research in some of these disciplines may be classed as biological, clinical medical, or other medical, depending upon the nature of the particular project.

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Other medical sciences are concerned with studies of the causes, effects, prevention, or control of abnormal conditions in man or in his environment as they relate to health, except for the clinical aspects as defined above.

Life sciences, nec[1]

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social psychology; educational, personnel, vocational psychology and testing; industrial and engineering psychology; development and personality.

Psychological sciences, nec[1]

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Astronomy:

laboratory astrophysics; optical astronomy; radio astronomy; theoretical astrophysics; X-ray, Gamma-ray, neutrino astronomy.

Chemistry:

inorganic; organo-metallic; organic; physical.

Physics:

acoustics; atomic and molecular; condensed matter; elementary particles; nuclear structure; optics; plasma.

Physical sciences, nec[1]

d. **ENVIRONMENTAL SCIENCES** (terrestrial and extraterrestrial) are concerned with the gross nonbiological properties of the areas of the solar system which directly or indirectly affect man's survival and welfare; they comprise the fields of atmospheric sciences, geological sciences, oceanography, and environmental sciences not elsewhere classified. Obligations for oceanography are confined to studies supporting physical oceanography. Studies pertaining to life in the sea, or other bodies of water, are reported as support of biology. Support of ship operations is, where appropriate, prorated between physical and biological oceanography. Examples of the disciplines under each of these fields are:

Atmospheric sciences:

aeronomy; solar; weather modification; extraterrestrial atmospheres; meteorology.

Geological sciences:

engineering geophysics; general geology; geodesy and gravity; geomagnetism; hydrology; inorganic geochemistry; isotopic geochemistry; organic geochemistry; laboratory geophysics; paleomagnetism; paleontology; physical geography and cartography; seismology; soil sciences.

Oceanography:

chemical oceanography; geological oceanography; physical oceanography; marine geophysics.

Environmental sciences, nec[1]

e. **MATHEMATICS** employs logical reasoning with the aid of symbols and is concerned with the development of methods of operation employing such symbols. Examples of mathematical disciplines are:

algebra; analysis; applied mathematics; computer science; foundations and logic; geometry; numerical analysis; statistics; topology.

f. **ENGINEERING** is concerned with studies directed toward developing engineering principles or toward making specific scientific principles usable in engineering practice. Engineering is divided into eight fields: aeronautical, astronautical, chemical, civil, electrical, mechanical, metallurgy and materials, and engineering not elsewhere classified. Examples of disciplines under each of these fields are:

Aeronautical:

aerodynamics.

Astronautical:

aerospace; space technology.

Chemical:

petroleum; petroleum refining; process.

Civil:

architectural; hydraulic; hydrologic; marine; sanitary and environmental; structural; transportation.

Electrical:

communication; electronic power.

Mechanical:

engineering mechanics.

Metallurgy and Materials:

ceramic; mining; textile; welding.

Engineering, nec [1]

agricultural; industrial and management; nuclear; ocean enganeering; systems.

g. **SOCIAL SCIENCES** are directed toward an understanding of the behavior of social institutions and groups and of individuals as members of a group. These include anthropology, economics, history, linguistics, political science, sociology, and social sciences not elsewhere classified. Examples of the disciplines under the fields of social science are:

Anthropology:

archaeology; cultural and personality; social and ethnology; applied anthropology.

Economics:

econometrics and economic statistics; history of economic thought; international economics; industrial, labor and agricultural economics; macroeconomics; microeconomics; public finance and fiscal policy; theory; economic systems and development.

History:

cultural; political; social; history and philosophy of science.

Linguistics:

anthropological-archaeological; computational; psycholinguistics; sociolinguistics.

Political science:

area or regional studies; comparative government; history of political ideas; international relations and law; national political and legal systems; political theory; public administration.

Sociology:

comparative and historical; complex organizations; culture and social structure; demography; group interactions; social problems and social welfare; sociological theory.

Social sciences, nec [1]

research in law and education not elsewhere classified; socioeconomic geography.

h. **OTHER SCIENCES** not elsewhere classified. Includes multidisciplinary and interdisciplinary projects that cannot be classified within one of the above broad fields of science.

(8) GEOGRAPHIC DISTRIBUTION OF 1970 R&D OBLIGATIONS

a. Ten agencies participated in the survey on the geographic distribution of obligations for research and development and R&D plant. These 10 respondents accounted for 98 percent of total Federal R&D and R&D plant obligations in 1970. The respondents were the Departments of Agriculture, Commerce, Defense, the Interior, Transportation, and Health, Education, and Welfare; the Atomic Energy Commission; the National Aeronautics and Space Administration; the National Science Foundation; and the Office of Economic Opportunity.

b. Data for 1970 were requested in terms of the principal location (State or outlying area) **where the work was performed by the prime contractor, grantee, or intramural organization.** Where this information was not available in their records, the respondents were asked to assign the obligations to the State, outlying area, etc. where the prime contractor, grantee, or intramural organization was located.

c. Obligations were reported for research and development as a combined amount.

d. Specifically omitted from the survey were R&D obligations to foreign performers and obligations for R&D plant used in support of foreign performers.

e. In addition to obtaining data on a prime contractor or grantee basis, the survey requested information on the geographic distribution of 1970 first-tier subcontracting under each new and continuing prime contract or grant for which $20 million or more was obligated in 1970.

Part II. Scientific and Technical Information

Scientific and technical information consists of knowledge or data resulting from the conduct of research and development, or knowledge of data required for organizing, administering, or performing research and development. It encompasses any information in recorded or other communicable form which presents the status, progress, or results of research and development in science or technology.

Exclusions:

(a) training costs for personnel engaged in scientific and technical information activities;

(b) raw scientific and technical data that have not been processed for use by scientific personnel engaged in research and development (included in part I of this survey);

(c) statistical and general-purpose data that are collected and organized for other than specific use in research and development (included in part III of this survey);

(d) information that has been prepared primarily to inform or instruct the general public or others below the graduate or professional level of scientific activity.

Scientific and technical information activities include all management, administrative, R&D, and operational efforts directed to the planning, support, control, and improvement of the functions or tasks that deal with the acquisition, processing, handling, and communication of scientific and technical information. These may include the acquisition, maintenance, or rental of special equipment primarily for use in connection with scientific and technical information activities.

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[1] Not elsewhere classified. Includes multidisciplinary projects within the broad field and single-disciplinary projects for which a separate field has not been assigned.

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Categories of Scientific and Technical Information Activity

(1) PUBLICATION AND DISTRIBUTION

a. **Publication and distribution.** This subcategory includes two activities.

Publication includes all document production tasks performed after the author's manuscript or similar initial recording of the information has been finished and leading to but not including initial issuance or distribution of the finished document. Examples of publication activities: evaluation of a manuscript or patent; professional writing; technical or copy editing and revising not performed by the author, abstractor, or bibliographer; technical drawing and artwork; preparation of final copy for printing or other reproduction; also composing, typesetting, proofreading, display, illustrating, photographing, layout, makeup, printing, mimeographing, and photoduplication.

These publication activities may be concerned with any of the following: data compliations, proceedings of conferences and symposia, specifications and manuals used in the R&D process, technical reports, journal articles, monographs, reviews, dissertations, summaries, abstracts, bibliographies, indexes, special reports, patents, reference books, and treatises.

Distribution includes functions related to the initial transmission or dissemination of newly documented scientific and technical information from source to user, for example, mailing, shipping, and maintenance of controls.

Excluded from category 1 are professional efforts involved in the compilation and preparation of reference documents or bibliographies. These activities are included under category 2, below. Also excluded are audiovisual aids, such as taped talks, slide presentations, and motion picture films. These are included under category 3, below.

b. **Support of publications** includes all page charges paid out of Federal funds to primary journals; special subscription arrangements to maintain primary journals; and grants or contracts for publication and distribution of journals, conference proceedings, monographs, or textbooks.

(2) DOCUMENTATION, REFERENCE AND INFORMATION SERVICES

a. **Library and reference services** include the acquisition, collection, exchange, loan, and storage of scientific and technical documentary materials. These may be books, periodicals, manuals, reports, and drawings, and such reference sources as abstract journals, indexes, and subject heading and title lists. This subcategory includes such activities as the organizing and processing of scientific and technical documentary materials. Such work may consist of: indexing, coding, filing, subject classifying, abstracting, announcing, listing, preparing bibliographies, reviewing, screening, documenting, and cataloging.

This category includes rental or acquisition and maintenance of computers and other equipment and costs of their operation. It includes special retrieval services provided in response to user needs (reprography, SDI, demand bibliographies, etc.), sale and loan of documentary materials, dissemination of documents via mail and personal visits, and liaison activities with users and other information services.

Documentation centers, depositories, clearinghouses, and libraries are included under this subcategory (a).

b. **Specialized information center services** (including technical information analysis center services) cover the collection, review, summarization, and evaluation of scientific and technical information and data in well-defined, specialized fields. They include advisory and other user services. Specialized information centers may be either discipline- or mission-oriented. The services of these centers are distinguished from those of documentation centers, clearinghouses, and libraries, whose functions are primarily concerned with the handling of documents rather than with the technical information contained in the documents.

c. **Translations** include all costs involved in the translation of documents and other materials from one language to another in support of R&D activities; also the purchase of foreign journals and other materials to be translated.

(3) SYMPOSIA AND AUDIOVISUAL MEDIA

a. **Symposia and technical meetings** include all efforts directed to planning, scheduling, announcing, supporting, sponsoring, conducting, and attending symposia, conferences, and meetings primarily concerned with disseminating scientific and technical information. The travel and subsistence of participants in such symposia, conferences, and meetings are covered in these costs.

b. **Audiovisual media and other forms of nonreading communication** refer to the costs of producing technical and documentary motion picture films, slides, and photographs for R&D purposes, as well as audio and visual aids, such as taped talks, television film, or visual magnetic tape. This category also includes exhibits but **excludes** media primarily intended for training or public information purposes.

(4) RESEARCH AND DEVELOPMENT IN INFORMATION SCIENCES, DOCUMENTATION AND INFORMATION SYSTEMS, TECHNIQUES AND DEVICES

This category includes the conduct and support of research and development of new and nonconventional methods, techniques, systems, and machines for improving scientific and technical information functions under each of the other three categories. Such support would include meetings related specifically to such R&D work.

It also includes the conduct and support of studies and surveys to identify broad and specific aspects of scientific information problems. Examples of activities included under this category are: development and testing of machines, devices, and techniques for storage and retrieval of information and data; linguistics research focused on information processing; language and machine translation; information theory; automata theory; artificial intelligence; logic and switching theory; operations or systems research on scientific and technical information systems and processes; documentation or document storage and retrieval; library science; network design; studies of subject classification and indexing schemes; and studies of scientific and technical information communication systems.

Also included under this category are applicable R&D costs for improving, modernizing, and renovating current scientific and technical information, data, and communication systems. Research and development conducted at documentation centers, libraries, and specialized information centers are included but not the costs associated with establishing new centers or systems once past the development stage. As soon as a new system moves out of the experimental phase and into the operational phase, its costs are included under the appropriate category and subcategory above (1, 2, or 3) and no longer under category 4.

Part III. Collection of General-Purpose Scientific Data

(1) GENERAL-PURPOSE SCIENTIFIC DATA

General-purpose scientific data are newly gathered statistics, observations, readings, specimens, and other facts obtained from such activities as surveys, field investigations, laboratory analyses, and compilation of operating records. These data represent available information which separately or in combination with other information can be applied to useful, **general** scientific purposes and are disseminated to a wide variety of users, including public agencies, the general public, and research investigators. They may have been collected primarily for general-purpose use or derived from an operating function. However, they are not data used solely for internal operating purposes.

Exclusion. General-purpose scientific data are distinguished in this survey from data collected in the conduct of research and development and from data gathered for scientific and technical information activities. The gathering of raw data primarily to further an R&D project is an integral part of the R&D process. Research on statistical survey methods and techniques is also considered a part of research and development. As to data collected as a part of scientific and technical information activities, these are distinguished from general-purpose scientific data because they are either derived from R&D activities or used in R&D activities primarily by scientists and engineers.

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It also includes the conduct and support of studies and surveys to identify broad and specific aspects of scientific information problems. Examples of activities included under this category are: development and testing of machines, devices, and techniques for storage and retrieval of information and data; linguistics research focused on information processing; language and machine translation; information theory; automata theory; artificial intelligence; logic and switching theory; operations or systems research on scientific and technical information systems and processes; documentation or document storage and retrieval; library science; network design; studies of subject classification and indexing schemes; and studies of scientific and technical information communication systems.

Also included under this category are applicable R&D costs for improving, modernizing, and renovating current scientific and technical information, data, and communication systems. Research and development conducted at documentation centers, libraries, and specialized information centers are included but not the costs associated with establishing new centers or systems once past the development stage. As soon as a new system moves out of the experimental phase and into the operational phase, its costs are included under the appropriate category and subcategory above (1, 2, or 3) and no longer under category 4.

Part III. Collection of General-Purpose Scientific Data

(1) GENERAL-PURPOSE SCIENTIFIC DATA

General-purpose scientific data are newly gathered statistics, observations, readings, specimens, and other facts obtained from such activities as surveys, field investigations, laboratory analyses, and compilation of operating records. These data represent available information which separately or in combination with other information can be applied to useful, **general** scientific purposes and are disseminated to a wide variety of users, including public agencies, the general public, and research investigators. They may have been collected primarily for general-purpose use or derived from an operating function. However, they are not data used solely for internal operating purposes.

Exclusion. General-purpose scientific data are distinguished in this survey from data collected in the conduct of research and development and from data gathered for scientific and technical information activities. The gathering of raw data primarily to further an R&D project is an integral part of the R&D process. Research on statistical survey methods and techniques is also considered a part of research and development. As to data collected as a part of scientific and technical information activities, these are distinguished from general-purpose scientific data because they are either derived from R&D activities or used in R&D activities primarily by scientists and engineers.

(2) NATURAL AND SOCIAL PHENOMENA

The general-purpose scientific data pertain to two phenomena:

(a) **Natural Phenomena:** data collected in the engineering, environmental, life, mathematical, physical and psychological sciences. Examples are precipitation measurements, tide and stream gauging, topographic mapping, the determination of physical and chemical constants, and the classification of entomological specimens.

(b) **Social Phenomena:** data collected in the social sciences. Examples are data concerned with population, employment, industrial and agricultural production, housing construction, education, crime, and other socioeconomic phenomena.

(3) CATEGORIES OR GENERAL-PURPOSE SCIENTIFIC DATA COLLECTION ACTIVITY

Gathering, Processing, and Collating include the planning and preparation of questionnaires and the evaluation of data for validity.

Analysis includes narrative discussion of data relationships and summarization of data for general use. **Excluded** is the analysis of scientific general-purpose data in conjunction with R&D projects; such activity is considered a part of research and development.

Publication includes preparation of general-purpose scientific data for publication or any other activities which made data available to the general public, such as preparation of exhibits.

Equipment includes the procurement or rental of equipment for gathering, processing, or collating data.

CHANGES IN REPORTING

Responses from the agencies in this survey, as in the previous ones, reflect updating of estimates for the last 2 years of the previous report. Such updating is normal in the budgetary cycle. In addition, from time to time, responses over the years have reflected reappraisals and revisions in classification of agencies' R&D operations. When this has occurred, the National Science Foundation has revised prior-year data to maintain consistency and comparability with the most recent reporting. Since no statistical inquiry is free of problems of concepts and definitions for the respondents, revisions to improve the reporting are encouraged by NSF.

No significant revisions in reporting were made for the agencies in this present survey. However, historical data in appendix tables C–92 through C–110 reflect changes for 1968 and prior years made when revisions in concept were introduced in previous surveys.

LIMITATIONS OF THE DATA

It is important to bear in mind that the data presented in this report are based upon the Federal budget. The respondents have reconciled the data reported here with amounts for scientific activities shown in **The Budget of the United States Government, Fiscal Year 1972.** The amounts reported for each year indicate the obligations or expenditures incurred, or expected to be incurred, in that year, regardless of when the funds were authorized or received by an agency and regardless of whether the funds were identified in the agency's budget specifically for research, development, R&D plant, scientific and technical information, or collection of general-purpose scientific data. Following the format of Federal budgets, data are reported in 3-year cycles.

In this report, amounts for 1970 reflect transactions of a completed fiscal year and thus are "actual" amounts. Data for 1971 and 1972 are based on various stages of the budget and planning cycles and consequently are "estimates." Data for 1972, moreover, do not reflect appropriation, apportionment, or allocation decisions that took place subsequent to receipt by NSF of data from the respondents. The text and statistical tables for 1972, thus, are agency proposals to undertake programs. Both 1971 and 1972 data are subject to reprogramming and other administrative changes instituted after publication of **The Budget, 1972.**

Aside from being estimates in budgetary terms, in a broader sense all data reported concerning scientific activities are estimates, and accounting precision cannot be imputed to them. Quantification of research and development is complicated by difficulties of classifying abstract and dynamic activities. Agency records in most cases do not classify agency scientific activities into such categories as basic research, applied research, and development. In addition, amounts for scientific activities are usually not uniformly nor precisely identified in budgets of different agencies. An element of "best judgment" therefore is introduced when a respondent classifies and identifies funds by character-of-work categories. The same element of subjective judgment also holds in categorizing a large interdisciplinary research program by primary field of science. Compensating for such factors, however, is the fact that the survey respondents, in general, are in agency subdivisions that have participated in as many as 20 successive annual surveys and have developed a general rationale for using information available in their records to meet the demands of the survey.

It should be mentioned that the Foundation encourages respondents to revise their reporting practices whenever necessary to improve accuracy. Such revisions made by the agencies are then incorporated into the historical data to maintain consistency and comparability of the statistical series.

In some cases it has not been possible to report the full cost of research and development. For example, the headquarters costs of planning and administering R&D programs of DOD and AEC are not included in these reports because these agencies have indicated that it is administratively impracticable to identify the amounts.

R&D plant data reported here are to some extent understated because of the difficulty encountered by some agencies in identifying and reporting this information, particularly in the case of DOD and NASA. While DOD reports obligations for R&D plant funded by its construction appropriation, it is able to identify only a small portion of the amount of R&D plant support included in R&D contracts that were funded from its RDT&E appropriation. NASA faces similar problems in reporting R&D plant data.

In the area of scientific and technical information, extramural obligations are limited to funds allocated for grants and contracts that are **primarily** for the support of scientific and technical information activities. As in prior volumes of this series, extramural funds for information activities performed as a supplemental, supporting service under grants or contracts primarily for research and development have been excluded because it is usually not feasible for the respondent to determine what portion of an R&D grant or contract actually supports information activities. Some R&D projects receive support from several agencies through a number of grants and/or contracts, and in such instances, related information activities may pertain to the overall R&D project and may not be identifiable under a particular grant or contract.

RELATION TO OTHER REPORTS

(1) FEDERAL SUPPORT TO UNIVERSITIES AND COLLEGES

The Committee on Academic Science and Engineering (CASE) of the Federal Council for Science and Technology prepares reports relating to Federal support of academic science. Both the CASE and **Federal Funds** reports provide data on Federal obligations for research and development and for R&D plant to universities and colleges and to university-administered Federally Funded Research and Development Centers (FFRDC's). The CASE report, however, is based on obligations of Federal agencies to each individual academic institution, while the **Federal Funds** report is concerned with obligations to universities and colleges as a performer group. Further, the CASE study is based on reports of only 13 agencies —the Departments of Agriculture, Commerce, Defense, Health, Education, and Welfare, Housing and Urban Development, the Interior, Labor, and Transportation; the Atomic Energy Commission; the National Aeronautics and Space Administration; the National Science Foundation; the Agency for International Development; and the Office of Economic Opportunity—while **Federal Funds** is composed of obligations of all agencies. (The 13 respondents for CASE, however, account for 99 percent of the Federal R&D total to universities and colleges and virtually all obligations to university-administered FFRDC's.) In addition, the CASE report includes funds for other activities, such as science education and non-science support.

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The different reporting procedures have led to different amounts being reported by CASE and **Federal Funds** as follows:

a. The obligations for research and development to universities and colleges reported for **Federal Funds** in 1970 amounted to $1,473 million or $4 million more than the amount reported for CASE.

b. The total R&D obligations to university-administered FFRDC's reported for **Federal Funds** was $750 million in 1970 or $50 million less than reported for CASE. The $50 million subcontracted by NASA's Jet Propulsion Laboratory accounted for this difference. For **Federal Funds** this amount is included in ultimate-performer categories (mainly industry), while for CASE the subcontracted amount was included in the R&D obligations to FFRDC's administered by universities.

c. The total R&D plant obligations to FFRDC's administered by universities and colleges reported for **Federal Funds** was $169 million in 1970 or $12 million more than reported for CASE. Most of this difference arose from AEC reporting "costs" for CASE and "obligations" for **Federal Funds.**

The following factors should also be considered in comparing the data appearing in the two reports:

(a) For **Federal Funds** each agency includes in its own obligations the amounts transferred to other agencies for furtherance of its work, and the receiving agencies do not report funds transferred to them. On the other hand, in the CASE survey, the data are reported by the agency that made the **final** distribution of the funds to a given institution. Thus, for the CASE survey, agencies included funds received from other agencies, and excluded funds transferred to other agencies (the reverse of the **Federal Funds** process). While such transfers should balance each other out with no resulting changes in total R&D obligations, these varying reporting practices do add to the possibility of differences between the two reports.

(b) The CASE reports, in most instances, are prepared by other components within each agency than those which prepare the **Federal Funds** responses. Furthermore, the CASE data are collected several months earlier than the **Federal Funds** statistics. Although, in theory, these conditions in themselves should not lead to reporting differences, in practice differences do arise.

(2) SPECIAL ANALYSES, BUDGET OF THE UNITED STATES

In a section of Special Analyses, **Budget of the United States Government,** the Office of Management and Budget (OMB) publishes estimates of obligations and expenditures for research, development, and R&D plant. However, the data in that section—"Special Analysis R, Federal Research and Development Programs" in the **1972 Budget**—do not provide as much detail on character of work or performers as **Federal Funds** and provide no information on fields of science or geographic distribution.

However, "Special Analysis R" and **Federal Funds** utilize the same definitions for research and development and for R&D plant. The estimates for research and development published in the two reports are comparable even though differences do exist. The differences between the two reports are as follows:

Total R&D obligations
(Billions of dollars)

	FY 1970	FY 1971	FY 1972
Federal Funds	$15.3	$15.4	$16.7
Special Analysis R	15.3	15.6	16.7

The variance in the two 1971 R&D totals stems largely from the inconsistent reporting practices followed by NASA. For **Federal Funds,** NASA reported its 1971 R&D funding in terms of the "budget plan" while for the special analysis it reported in terms of "obligations."

The differences between the two reports with respect to R&D obligations to universities and colleges are as follows:

R&D obligations to universities and colleges
(Millions of dollars)

	FY 1970	FY 1971	FY 1972
Federal Funds	$1,473	$1,617	$1,826
Special Analysis R	1,479	1,653	1,896

The lower **Federal Funds** totals for R&D obligations to universities and colleges for 1971 and 1972 are primarily due to revisions made in the estimates after data were provided for the special analysis, particularly in the case of the NIH estimates for 1972.

OMB also publishes a special analysis on the principal statistical programs of Federal agencies (Special Analysis F, for fiscal year 1972), which is somewhat comparable to part III of the **Federal Funds** survey (general-purpose scientific data collection). However, "Special Analysis F" covers only social phenomena data while **Federal Funds** part III includes natural phenomena data as well. Also, some activities of Federal agencies have been classified by OMB as statistical although reported as research and development or scientific and technical information to NSF. Furthermore, the OMB analysis does not report on a number of agencies that are included in part III of the Foundation's survey.

The foregoing differences reflect varying methods used to obtain the findings for the two reports. Comparison of these methods may be useful in clarifying individual agency concepts and in revealing complexities in reporting.

(3) AN ANALYSIS OF FEDERAL R&D FUNDING BY BUDGET FUNCTION, 1960–72

NSF has published a report under the above title which provides an analysis of Federal R&D expenditures by functional categories. The functional report compares total Federal outlays by budget functions with Federal R&D expenditures within each of the categories for fiscal years 1960 through 1972. The annual **Federal Funds** series, by contrast, reports on Federal R&D expenditures by agencies but not by functional categories.

The R&D expenditure data for 1960–69 in the function report were based on information submitted by the agencies for the **Federal Funds** series. Thus, the overall R&D expenditures are the same for these years in both reports. However, the function report was prepared before agency responses to **Federal Funds,** Volume XX were received, and therefore, the 1970–72 R&D expenditures had to be based on information submitted by the agencies to OMB for its special analysis of R&D programs with certain adjustments (see above). Consequently, the overall R&D expenditures totals for 1970–72 in the function report differ slightly from the expenditure totals in **Federal Funds**, Volume XX.

(4) OTHER REPORTS

Individual agencies may classify their R&D programs for purposes other than those for which the **Federal Funds** survey is conducted. Definitions and guidelines that are suitable to those other purposes may result in information that is not comparable with the reports transmitted to the Foundation for **Federal Funds.**

SOURCES

Data on R&D funds in this report for years prior to 1952 were compiled by the Bureau of the Budget (which later became OMB). Later data were based on NSF surveys. These data have been published in previous issues of this series, but certain adjustments have been made to reflect comparability with the latest reporting concepts introduced by the agencies.

Besides the statistical data collected through the Foundation's survey of Federal agencies, a variety of sources were used in the text of this report, including the narrative statements submitted by the agencies, published records of testimony presented by the agencies to committees of the Senate and the House, the **1972 Budget Appendix**, and personal contacts with agency respondents.

APPENDIX B

federally funded research and development centers fy 1970-72

DEPARTMENT OF DEFENSE

OFFICE OF THE SECRETARY OF DEFENSE

Administered by Other Nonprofit Institutions

Institute for Defense Analyses (IDA)

DEPARTMENT OF THE ARMY

Administered by Universities and Colleges

Army Mathematics Research Center (University of Wisconsin)[1]
Center for Research in Social Systems (American University)[1]

Administered by Other Nonprofit Institutions

Human Resources Research Organization
Research Analysis Corporation (RAC)

DEPARTMENT OF THE NAVY

Administered by Universities and Colleges

Applied Physics Laboratory (Johns Hopkins University)
Applied Physics Laboratory (University of Washington)
Center for Naval Analyses (University of Rochester)
Ordnance Research Laboratory (Pennsylvania State University)

DEPARTMENT OF THE AIR FORCE

Administered by Universities and Colleges

Lincoln Laboratory (Massachusetts Institute of Technology)

Administered by Other Nonprofit Institutions

Aerospace Corporation
Analytic Services, Inc. (ANSER)
Electromagnetic Compatability Analyses Center (Illinois Institute of Technology, Research Institute (IITRI))
MITRE Corporation
RAND Corporation

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

OFFICE OF EDUCATION

Administered by Universities and Colleges

Center for the Advanced Study of Educational Administration (University of Oregon)
Center for Research and Development in Higher Education (University of California)

APPENDIX B

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DEPARTMENT OF DEFENSE

OFFICE OF THE SECRETARY OF DEFENSE

Administered by Other Nonprofit Institutions

- Institute for Defense Analyses (IDA)

DEPARTMENT OF THE ARMY

Administered by Universities and Colleges

- Army Mathematics Research Center (University of Wisconsin) [1]
- Center for Research in Social Systems (American University) [1]

Administered by Other Nonprofit Institutions

- Human Resources Research Organization
- Research Analysis Corporation (RAC)

DEPARTMENT OF THE NAVY

Administered by Universities and Colleges

- Applied Physics Laboratory (Johns Hopkins University)
- Applied Physics Laboratory (University of Washington)
- Center for Naval Analyses (University of Rochester)
- Ordnance Research Laboratory (Pennsylvania State University)

DEPARTMENT OF THE AIR FORCE

Administered by Universities and Colleges

- Lincoln Laboratory (Massachusetts Institute of Technology)

Administered by Other Nonprofit Institutions

- Aerospace Corporation
- Analytic Services, Inc. (ANSER)
- Electromagnetic Compatability Analyses Center (Illinois Institute of Technology, Research Institute (IITRI))
- MITRE Corporation
- RAND Corporation

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

OFFICE OF EDUCATION

Administered by Universities and Colleges

- Center for the Advanced Study of Educational Administration (University of Oregon)
- Center for Research and Development in Higher Education (University of California)
- Center for Research and Development for Learning and Re-Education (University of Wisconsin)
- Center for the Study of Evaluation of Instructional Programs (University of California)
- Center for the Study of Social Organization of Schools and the Learning Process (Johns Hopkins University)
- Coordination Center for the National Program in Early Childhood Education (University of Illinois)
- Learning Research and Development Center (University of Pittsburgh)
- Research and Development Center in Educational Stimulation (University of Georgia)
- Research and Development Center in Teacher Education (University of Texas)
- Stanford Center for Research and Development in Teaching (Stanford University)

Administered by Other Nonprofit Institutions

- Appalachia Educational Laboratory
- Center for Educational Policy Research (Stanford Research Institute)
- Center for Urban Education
- Central Midwestern Regional Educational Laboratory
- Eastern Regional Institute of Education
- Educational Development Center, Inc.
- The Far West Laboratory for Educational Research and Development
- Mid-Continent Regional Educational Laboratory
- Northwest Regional Educational Laboratory
- Policy Research Center (Syracuse University Research Corporation)
- Regional Educational Laboratory for the Carolinas and Virginia
- Research for Better Schools, Inc.
- Southeastern Educational Laboratory
- Southwest Educational Development Laboratory
- Southwest Regional Educational Laboratory
- Southwestern Cooperative Educational Laboratory
- Upper Midwest Regional Educational Laboratory, Inc.

ATOMIC ENERGY COMMISSION

Administered by Industrial Firms

Bettis Atomic Power Laboratory (Westinghouse Electric Corp.)
Knolls Atomic Power Laboratory (General Electric Company)
Mound Laboratory (Monsanto Research Corp.)
National Reactor Testing Station (Idaho Nuclear Corp.)
Oak Ridge National Laboratory (Union Carbide Corp.)
Pacific Northwest Laboratory (WADCO Corp., Subsidiary of Westinghouse Electric Corporation) [2]
Sandia Laboratory (Western Electric Co., Inc.—Sandia Corp.)
Savannah River Laboratory (E. I. duPont de Nemours & Co., Inc.)

Administered by Universities and Colleges

Ames Laboratory (Iowa State University of Science and Technology)
Argonne National Laboratory (University of Chicago and Argonne Universities Assn.)
Brookhaven National Laboratory (Associated Universities, Inc.)
Cambridge Electron Accelerator (Harvard University)
Lawrence Radiation Laboratory, Berkeley and Livermore (University of California)
Los Alamos Scientific Laboratory (University of California)
National Accelerator Laboratory (Universities Research Association, Inc.)
Oak Ridge Associated Universities
Plasma Physics Laboratory (Princeton University)
Princeton-Pennsylvania Accelerator (Princeton University) [3]
Stanford Linear Accelerator Center (Stanford University)

Administered by Other Nonprofit Institutions

Atomic Bomb Casualty Commission (National Academy of Sciences)
Pacific Northwest Laboratory (Battelle Memorial Institute) [2]

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Administered by Universities and Colleges

Jet Propulsion Laboratory (California Institute of Technology)
Space Radiation Effects Laboratory (College of William and Mary)

NATIONAL SCIENCE FOUNDATION

Administered by Universities and Colleges

Arecibo Observatory (Cornell University)
Cerro Tololo Inter-American Observatory (Association of Universities for Research in Astronomy, Inc.)
Kitt peak National Observatory (Association of Universities for Research in Astronomy, Inc.)
National Center for Atmospheric Research (University Corporation for Atmospheric Research)
National Radio Astronomy Observatory (Associated Universities, Inc.)

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[1] Phased out as an FFRDC as of the end of fiscal year 1970.

[2] Prior to 1971 Battelle Memorial Institute was the sole contractor at the Pacific Northwest Laboratory. In 1971, the WADCO Corp. became the second contractor along with Battelle.

[3] Phased out as an FFRDC at the end of fiscal year 1971.

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statistical tables, part I

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- The source of data is the National Science Foundation, except where noted on individual tables.
- Estimates for 1972 are based on **The Budget, FY 1972**, as submitted to Congress, and do not reflect subsequent appropriation and apportionment actions.
- Asterisks appearing in lieu of figures indicate that the amounts are less than $50,000.
- The abbreviation "FFRDC" appearing in statistical tables refers to Federally Funded Research and Development Centers.
- Defense Agencies within the Department of Defense include agencies such as the Advanced Research Projects Agency (ARPA), the Defense Atomic Support Agency, and the Defense Communications Agency.
- Departmentwide Funds of the Department of Defense include the Emergency Fund and Civil Defense.
- The Atomic Energy Commission's R&D data reflect accrued obligations and costs.
- In tables showing extramural performers, obligations to agricultural experiment stations are included under obligations to universities and colleges.
- The National Oceanic and Atmospheric Administration (NOAA) was established in fiscal year 1971 within the Department of Commerce. NOAA includes Commerce's Environmental Science Services Administration (ESSA), which is its largest component. It also has incorporated from Interior the Bureau of Commercial Fisheries, the marine sport fish activities of the Fish and Wildlife Service, and the Marine Minerals Technology Center of the Bureau of Mines. NOAA has taken over the Army Corps of Engineers' Great Lakes Survey and the Navy's National Oceanographic Data Center and National Oceanographic Instrumentation Center. From the Department of Transportation NOAA has taken the data buoy development activities of the Coast Guard and from the National Science Foundation, its Sea Grant Programs. These agency subdivisions' R&D activities are reported for fiscal year 1970 as though they had been part of NOAA that year.
- The Environmental Protection Agency (EPA) was established in fiscal year 1971. EPA combines a number of components formerly within HEW: the National Air Pollution Control Administration, the Bureau of Solid Waste Management, and the Bureau of Water Hygiene (all previously reported under the Environmental Health Service) and portions of the Bureau of Radiological Health and the pesticide control functions of the Food and Drug Administration. EPA also includes what was previously Interior's Federal Water Pollution Control Administration, the pesticide study functions of its Fish and Wildlife Service, and the Gulf Breeze (Fla.) Biological Laboratory of its Bureau of Commercial Fisheries. In addition, EPA has taken over from the Atomic Energy Commission its environmental radiation standard-setting authority and the pesticides registration program of the Department of Agriculture's Agricultural Research Service. These agency subdivisions' R&D activities are reported for fiscal year 1970 as though they had been part of EPA that year.

Table C-1. Summary of Federal funds for research, development, and R&D plant, fiscal years 1970, 1971, and

[Millions of dollars]

Item	Actual 1970	Estimates	
		1971	1972
TOTAL EXPENDITURES FOR RESEARCH, DEVELOPMENT, AND R&D PLANT	15,735.8	15,988.2	16,314.8
Research and Development	15,157.0	15,327.0	15,673.0
R&D Plant	578.9	661.1	641.8
TOTAL OBLIGATIONS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT	15,854.3	16,046.3	17,249.8
Research and Development	15,329.8	15,387.2	16,661.5
Total Research	5,601.9	5,995.1	6,643.6
Basic Research	2,062.3	2,165.0	2,399.1
Applied Research	3,539.7	3,830.1	4,244.5
Development	9,727.9	9,392.1	10,017.9
R&D Plant	524.4	659.1	588.3
Research and Development:			
Performers:			
Federal intramural [a]	3,875.5	3,928.7	4,139.1
Industrial firms	7,950.6	7,718.1	8,504.1
FFRDC's administered by industrial firms	430.7	478.6	497.9
Universities and colleges	1,472.9	1,616.6	1,826.0
FFRDC's administered by universities and colleges	749.7	762.1	778.0
Nonprofit institutions	462.4	470.9	483.9
FFRDC's administered by nonprofit institutions	249.1	208.3	210.9
Other domestic performers	98.7	136.2	145.4
Foreign	40.2	67.7	76.1
Research:			
Performers:			
Federal intramural [a]	2,032.8	2,102.0	2,223.3
Industrial firms	1,294.1	1,405.0	1,674.3
FFRDC's administered by industrial firms	72.9	72.1	75.2
Universities and colleges	1,351.6	1,470.7	1,668.5
FFRDC's administered by universities and colleges	417.2	428.0	435.7
Nonprofit institutions	268.3	302.6	330.8
FFRDC's administered by nonprofit institutions	45.1	45.9	50.0
Other domestic performers	88.2	113.5	123.9
Foreign	31.8	55.3	61.8
Field of science:			
Life sciences	1,533.4	1,735.1	1,945.1
Psychology	113.3	125.2	140.4
Physical sciences	1,010.5	1,025.5	1,086.5
Environmental sciences	586.6	632.1	702.0
Mathematics	102.1	104.0	111.8
Engineering	1,967.7	2,013.9	2,197.7
Social sciences	215.9	273.0	311.0
Other sciences	72.3	86.4	149.2
Basic Research:			
Performers:			
Federal intramural [a]	658.3	669.1	704.8
Industrial firms	290.1	321.1	401.3
FFRDC's administered by industrial firms	29.9	30.4	32.8
Universities and colleges	718.4	743.6	842.9
FFRDC's administered by universities and colleges	267.4	283.0	286.1

Item
Basic research—Continued
Nonprofit institutions
FFRDC's administered by nonprofit institutions
Other domestic performers
Foreign
Field of science:
Life sciences
Psychology
Physical sciences
Environmental sciences
Mathematics
Engineering
Social sciences
Other sciences
Applied research:
Performers:
Federal intramural [a]
Industrial firms
FFRDC's administered by industrial firms
Universities and colleges
FFRDC's administered by universities and colleg
Nonprofit institutions
FFRDC's administered by nonprofit institutions
Other domestic performers
Foreign
Field of science:
Life sciences
Psychology
Physical sciences
Environmental sciences
Mathematics
Engineering
Social sciences
Other sciences
Development:
Performers:
Federal intramural [a]
Industrial firms
FFRDC's administered by industrial firms
Universities and colleges
FFRDC's administered by universities and colleg
Nonprofit institutions
FFRDC's administered by nonprofit institutions
Other domestic performers
Foreign
R&D Plant:
Performers supported:
Federal intramural
Industrial firms
FFRDC's administered by industrial firms
Universities and colleges
FFRDC's administered by universities and colle
Nonprofit institutions
FFRDC's administered by nonprofit institutions
Other domestic performers
Foreign

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[a] Intramural activities cover costs associated with the administration of intramural and extramural programs by Federal personnel as well as actual intramural performance.

ary of Federal funds for research, development, and R&D plant, fiscal years 1970, 1971, and 1972

[Millions of dollars]

	Actual 1970	Estimates 1971	Estimates 1972
ND R&D			
	15,735.8	15,988.2	16,314.8
	15,157.0	15,327.0	15,673.0
	578.9	661.1	641.8
ND R&D			
	15,854.3	16,046.3	17,249.8
	15,329.8	15,387.2	16,661.5
	5,601.9	5,995.1	6,643.6
	2,062.3	2,165.0	2,399.1
	3,539.7	3,830.1	4,244.5
	9,727.9	9,392.1	10,017.9
	524.4	659.1	588.3
	3,875.5	3,928.7	4,139.1
	7,950.6	7,718.1	8,504.1
	430.7	478.6	497.9
	1,472.9	1,616.6	1,826.0
	749.7	762.1	778.0
	462.4	470.9	483.9
	249.1	208.3	210.9
	98.7	136.2	145.4
	40.2	67.7	76.1
	2,032.8	2,102.0	2,223.3
	1,294.1	1,405.0	1,674.3
	72.9	72.1	75.2
	1,351.6	1,470.7	1,668.5
	417.2	428.0	435.7
	268.3	302.6	330.8
	45.1	45.9	50.0
	88.2	113.5	123.9
	31.8	55.3	61.8
	1,533.4	1,735.1	1,945.1
	113.3	125.2	140.4
	1,010.5	1,025.5	1,086.5
	586.6	632.1	702.0
	102.1	104.0	111.8
	1,967.7	2,013.9	2,197.7
	215.9	273.0	311.0
	72.3	86.4	149.2
	658.3	669.1	704.8
	290.1	321.1	401.3
	29.9	30.4	32.8
	718.4	743.6	842.9
	267.4	283.0	286.1

Item	Actual 1970	Estimates 1971	Estimates 1972
Basic research—Continued			
Nonprofit institutions	59.9	65.8	73.4
FFRDC's administered by nonprofit institutions	3.5	3.0	2.8
Other domestic performers	20.1	27.3	31.3
Foreign	14.6	21.7	23.8
Field of science:			
Life sciences	576.0	631.2	735.3
Psychology	57.2	60.2	66.0
Physical sciences	704.5	725.5	730.0
Environmental sciences	352.4	361.6	419.3
Mathematics	58.9	53.1	58.2
Engineering	242.6	239.7	248.0
Social sciences	66.1	81.4	99.9
Other sciences	4.5	12.4	42.5
Applied research:			
Performers:			
Federal intramural[a]	1,374.5	1,432.9	1,518.5
Industrial firms	1,004.0	1,083.9	1,273.1
FFRDC's administered by industrial firms	43.0	41.7	42.4
Universities and colleges	633.2	727.1	825.6
FFRDC's administered by universities and colleges	149.8	145.0	149.7
Nonprofit institutions	208.4	236.8	257.4
FFRDC's administered by nonprofit institutions	41.5	42.8	47.3
Other domestic performers	68.1	86.2	92.6
Foreign	17.1	33.6	38.0
Field of science:			
Life sciences	957.4	1,104.0	1,209.8
Psychology	56.1	65.0	74.4
Physical sciences	306.0	299.9	356.5
Environmental sciences	234.3	270.5	282.7
Mathematics	43.2	50.9	53.6
Engineering	1,725.1	1,774.2	1,949.7
Social sciences	149.7	191.6	211.2
Other sciences	67.9	74.0	106.6
Development:			
Performers:			
Federal intramural[a]	1,842.7	1,826.7	1,915.8
Industrial firms	6,656.5	6,313.1	6,829.7
FFRDC's administered by industrial firms	357.8	406.5	422.7
Universities and colleges	121.3	145.9	157.5
FFRDC's administered by universities and colleges	332.5	334.1	342.3
Nonprofit institutions	194.1	168.3	153.2
FFRDC's administered by nonprofit institutions	204.0	162.5	160.8
Other domestic performers	10.5	22.6	21.5
Foreign	8.5	12.4	14.3
R&D Plant:			
Performers supported:			
Federal intramural	166.0	236.2	289.2
Industrial firms	41.4	71.5	52.2
FFRDC's administered by industrial firms	60.9	123.1	74.3
Universities and colleges	56.1	46.6	32.4
FFRDC's administered by universities and colleges	169.0	175.7	133.9
Nonprofit institutions	4.7	3.4	3.6
FFRDC's administered by nonprofit institutions	24.1	1.8	1.8
Other domestic performers	2.1	.1	.1
Foreign	.1	.7	.7

mural and extramural programs by Federal personnel as well as actual intramural performance.

TABLE C-2. FEDERAL FUNDS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(MILLIONS OF DOLLARS)

AGENCY AND SUBDIVISION	OBLIGATIONS			EXPENDITURES		
		ESTIMATES			ESTIMATES	
	ACTUAL, 1970	1971	1972	ACTUAL, 1970	1971	1972
TOTAL, ALL AGENCIES	15,854.3	16,046.3	17,249.8	15,735.8	15,988.2	16,314.8
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL	286.4	311.7	317.7	298.6	316.2	322.0
AGRICULTURAL RESEARCH SERVICE	164.0	180.0	180.5	172.6	178.9	181.9
COOPERATIVE STATE RESEARCH SERVICE	62.1	67.0	73.6	62.5	70.7	73.8
ECONOMIC RESEARCH SERVICE	14.9	15.7	15.4	15.8	15.2	14.9
FARMER COOPERATIVE SERVICE	.9	.9	.9	.9	1.0	1.0
FOREST SERVICE	43.7	47.1	46.3	45.8	49.4	49.4
NATIONAL AGRICULTURAL LIBRARY	.2	.3	.3	.3	.3	.3
STATISTICAL REPORTING SERVICE	.7	.7	.7	.7	.7	.7
DEPARTMENT OF COMMERCE, TOTAL	125.5	166.4	185.3	127.9	144.5	163.0
BUREAU OF THE CENSUS	3.0	4.3	3.5	3.0	4.3	3.5
ECONOMIC DEVELOPMENT ADMINISTRATION	8.8	5.4	5.1	10.4	5.7	5.4
MARITIME ADMINISTRATION	12.6	24.3	26.0	6.9	12.1	22.0
NATIONAL BUREAU OF STANDARDS	30.8	35.4	34.8	31.3	34.1	35.9
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	66.4	89.7	105.8	72.3	81.8	86.4
OFFICE OF BUSINESS ECONOMICS	3.5	4.0	4.5	3.7	3.8	4.4
OFFICE OF TELECOMMUNICATIONS	-	2.6	5.0	-	2.3	4.9
PATENT OFFICE	.4	.6	.6	.4	.5	.6
DEPARTMENT OF DEFENSE, TOTAL	7,500.9	7,582.0	8,492.4	7,587.9	7,726.8	7,912.8
DEPARTMENT OF THE ARMY	1,687.0	1,729.3	2,108.7	1,771.6	1,767.1	1,893.6
MILITARY FUNCTIONS	1,677.1	1,719.5	2,096.2	1,762.1	1,757.7	1,880.0
RDT&E APPROPRIATIONS	1,576.3	1,606.0	1,995.0	1,665.5	1,638.0	1,778.0
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	79.4	82.0	73.0	80.7	79.9	72.9
MILITARY CONSTRUCTION	21.5	31.4	28.3	15.9	39.8	29.1
CIVIL FUNCTIONS	9.9	9.8	12.5	9.5	9.4	13.6
DEPARTMENT OF THE NAVY	2,276.1	2,273.4	2,553.0	2,172.4	2,271.0	2,351.5
RDT&E APPROPRIATIONS	2,191.0	2,173.0	2,453.0	2,084.2	2,177.0	2,260.0
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	73.4	71.3	67.7	73.4	71.2	67.5
MILITARY CONSTRUCTION	10.6	28.2	29.1	14.2	21.8	22.9
SPECIAL FOREIGN CURRENCY PROGRAM	1.1	.9	3.2	.6	.9	1.2
DEPARTMENT OF THE AIR FORCE	3,049.1	3,075.3	3,265.4	3,150.1	3,173.5	3,139.2
RDT&E APPROPRIATIONS	2,838.6	2,864.0	3,068.0	2,937.1	2,963.0	2,947.0
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	202.5	194.3	171.8	202.5	194.3	171.8
MILITARY CONSTRUCTION	8.0	16.5	25.6	10.4	16.0	20.4
SPECIAL FOREIGN CURRENCY PROGRAM	.1	.4	-	.1	.1	.1
DEFENSE AGENCIES	484.6	450.5	511.7	488.0	495.7	479.6

NATIONAL AGRICULTURAL LIBRARY	.2	.3	.3	.3	.3	.3
STATISTICAL REPORTING SERVICE	.7	.7	.7	.7	.7	.7
DEPARTMENT OF COMMERCE, TOTAL	125.5	166.4	185.3	127.9	144.5	163.0
BUREAU OF THE CENSUS	3.0	4.3	3.5	3.0	4.3	3.5
ECONOMIC DEVELOPMENT ADMINISTRATION	8.8	5.4	5.1	10.4	5.7	5.4
MARITIME ADMINISTRATION	12.6	24.3	26.0	6.9	12.1	22.0
NATIONAL BUREAU OF STANDARDS	30.8	35.4	34.8	31.3	34.1	35.9
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	66.4	89.7	105.8	72.3	81.8	86.4
OFFICE OF BUSINESS ECONOMICS	3.5	4.0	4.5	3.7	3.8	4.4
OFFICE OF TELECOMMUNICATIONS	-	2.6	5.0	-	2.3	4.9
PATENT OFFICE	.4	.6	.6	.4	.5	.6
DEPARTMENT OF DEFENSE, TOTAL	7,500.9	7,582.0	8,492.4	7,587.9	7,726.8	7,912.8
DEPARTMENT OF THE ARMY	1,687.0	1,729.3	2,108.7	1,771.6	1,767.1	1,893.6
MILITARY FUNCTIONS	1,677.1	1,719.5	2,096.2	1,762.1	1,757.7	1,880.0
RDT&E APPROPRIATIONS	1,576.3	1,606.0	1,995.0	1,665.5	1,638.0	1,778.0
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	79.4	82.0	73.0	80.7	79.9	72.9
MILITARY CONSTRUCTION	21.5	31.4	28.3	15.9	39.8	29.1
CIVIL FUNCTIONS	9.9	9.8	12.5	9.5	9.4	13.6
DEPARTMENT OF THE NAVY	2,276.1	2,273.4	2,553.0	2,172.4	2,271.0	2,351.5
RDT&E APPROPRIATIONS	2,191.0	2,173.0	2,453.0	2,084.2	2,177.0	2,260.0
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	73.4	71.3	67.7	73.4	71.2	67.5
MILITARY CONSTRUCTION	10.6	28.2	29.1	14.2	21.8	22.9
SPECIAL FOREIGN CURRENCY PROGRAM	1.1	.9	3.2	.6	.9	1.2
DEPARTMENT OF THE AIR FORCE	3,049.1	3,075.3	3,265.4	3,150.1	3,173.5	3,139.2
RDT&E APPROPRIATIONS	2,838.6	2,864.0	3,068.0	2,937.1	2,963.0	2,947.0
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	202.5	194.3	171.8	202.5	194.3	171.8
MILITARY CONSTRUCTION	8.0	16.5	25.6	10.4	16.0	20.4
SPECIAL FOREIGN CURRENCY PROGRAM	.1	.4	-	.1	.1	.1
DEFENSE AGENCIES	484.6	450.5	511.7	488.0	495.7	479.6
RDT&E APPROPRIATIONS	476.3	445.7	507.3	479.4	488.0	474.0
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	5.9	4.7	4.4	5.9	4.7	4.4
MILITARY CONSTRUCTION	2.3	.1	-	2.6	2.9	1.2
DEPARTMENTWIDE FUNDS	4.1	53.6	53.7	5.9	19.6	48.8
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	1,252.2	1,504.3	1,658.5	1,261.3	1,390.4	1,538.0
FOOD AND DRUG ADMINISTRATION	21.8	28.5	40.0	18.7	24.1	30.6
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	188.4	227.9	229.5	180.5	203.5	217.7
NATIONAL INSTITUTES OF HEALTH	893.2	1,060.1	1,185.5	917.7	1,007.1	1,090.3
OFFICE OF CHILD DEVELOPMENT	2.0	5.5	16.5	1.0	2.5	10.5
OFFICE OF EDUCATION	99.5	133.2	138.4	94.6	105.8	146.9
SOCIAL AND REHABILITATION SERVICE	34.9	35.6	34.4	36.6	34.5	28.5
SOCIAL SECURITY ADMINISTRATION	12.4	13.5	14.3	12.2	13.0	13.3
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	29.9	49.4	49.0	15.3	53.9	48.9
DEPARTMENT OF THE INTERIOR, TOTAL	168.5	199.1	216.6	159.8	193.6	208.7
BONNEVILLE POWER ADMINISTRATION	2.1	3.6	4.1	2.2	4.0	3.6
BUREAU OF LAND MANAGEMENT	.7	.8	.8	.7	.8	.8
BUREAU OF MINES	46.5	58.0	66.8	37.3	58.2	66.6
BUREAU OF OUTDOOR RECREATION	.1	.1	.1	.1	.1	.1
BUREAU OF RECLAMATION	7.3	9.1	9.6	7.5	9.6	9.6
BUREAU OF SPORT FISHERIES AND WILDLIFE	20.5	23.1	23.5	18.5	20.5	20.0
GEOLOGICAL SURVEY	41.0	43.2	48.5	40.8	42.8	47.5
OFFICE OF COAL RESEARCH	13.5	19.2	21.0	16.4	17.5	18.8
OFFICE OF SALINE WATER	26.2	28.7	27.0	24.9	28.7	28.4
OFFICE OF THE SECRETARY	-	.8	1.6	-	.5	1.5
OFFICE OF WATER RESOURCES RESEARCH	10.8	12.4	13.5	11.4	10.9	11.7

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TABLE C-2. FEDERAL FUNDS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

CONTINUED (MILLIONS OF DOLLARS)

AGENCY AND SUBDIVISION	OBLIGATIONS			EXPENDITURES		
		ESTIMATES			ESTIMATES	
	ACTUAL, 1970	1971	1972	ACTUAL, 1970	1971	1972
DEPARTMENT OF JUSTICE, TOTAL	8.6	10.1	23.9	3.6	12.6	20.0
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	.8	1.6	2.2	.8	1.4	2.1
BUREAU OF PRISONS	.2	.2	.3	.2	.2	.2
FEDERAL BUREAU OF INVESTIGATION	.2	.8	.5	.2	.6	.6
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION	7.4	7.5	21.0	2.5	10.3	17.1
DEPARTMENT OF LABOR, TOTAL	20.6	24.5	24.9	19.8	23.9	24.6
BUREAU OF LABOR STATISTICS	3.8	3.8	3.8	3.8	3.7	3.7
LABOR-MANAGEMENT SERVICES ADMINISTRATION	.3	.7	.8	.3	.7	.8
MANPOWER ADMINISTRATION	14.3	17.4	17.7	13.7	16.9	17.5
WORKPLACE STANDARDS ADMINISTRATION	2.2	2.6	2.5	2.0	2.5	2.5
POSTAL SERVICE	38.7	46.3	76.7	29.8	38.3	46.3
DEPARTMENT OF STATE, TOTAL	27.6	40.8	44.4	21.5	27.6	30.7
DEPARTMENTAL FUNDS	.1	.4	.7	.1	.4	.7
AGENCY FOR INTERNATIONAL DEVELOPMENT	27.3	40.3	43.7	21.0	27.0	30.0
PEACE CORPS	.1	.1	-	.4	.2	-
DEPARTMENT OF TRANSPORTATION, TOTAL	322.8	456.2	525.8	262.6	416.2	561.0
FEDERAL AVIATION ADMINISTRATION	56.3	79.3	84.1	53.9	58.2	96.8
FEDERAL HIGHWAY ADMINISTRATION	32.9	32.7	38.2	32.5	34.8	40.2
FEDERAL RAILROAD ADMINISTRATION	16.4	33.2	42.7	11.4	18.3	31.7
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION	19.5	16.7	27.5	19.5	16.7	27.5
OFFICE OF THE SECRETARY	169.5	249.1	266.0	118.7	245.5	295.5
UNITED STATES COAST GUARD	18.7	25.8	42.0	17.1	23.5	44.0
URBAN MASS TRANSPORTATION ADMINISTRATION	9.5	19.4	25.4	9.5	19.4	25.4
DEPARTMENT OF THE TREASURY, TOTAL	.6	1.0	.9	.6	1.0	.9
BUREAU OF ENGRAVING AND PRINTING	.6	1.0	.9	.6	1.0	.9
OTHER AGENCIES						
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS	.6	.5	.5	.6	.5	.5
ATOMIC ENERGY COMMISSION	1,611.9	1,660.0	1,494.3	1,616.0	1,618.9	1,523.0
CIVIL AERONAUTICS BOARD	.3	.3	.3	.3	.3	.3
CIVIL SERVICE COMMISSION	.4	.5	.5	.4	.5	.5
ENVIRONMENTAL PROTECTION AGENCY	90.5	121.0	166.7	70.2	91.5	111.1
FEDERAL COMMUNICATIONS COMMISSION	1.0	.6	.9	1.0	.7	.7
FEDERAL HOME LOAN BANK BOARD	.4	.4	.5	.4	.4	.5
FEDERAL TRADE COMMISSION	.4	.5	.5	.4	.5	.5
GENERAL SERVICES ADMINISTRATION	.3	.3	.2	.3	.3	.2
LIBRARY OF CONGRESS	1.9	2.5	3.9	1.9	2.1	3.9
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	3,833.4	3,272.7	3,244.8	3,753.1	3,368.9	3,152.4
NATIONAL SCIENCE FOUNDATION	312.3	366.6	513.2	324.1	359.7	430.6
OFFICE OF ECONOMIC OPPORTUNITY	123.4	115.6	100.0	79.3	90.8	95.0
OFFICE OF EMERGENCY PREPAREDNESS	1.0	1.0	.5	.7	1.6	.5
OFFICE OF SCIENCE AND TECHNOLOGY	1.9	2.0	2.2	1.9	2.0	2.2
SMALL BUSINESS ADMINISTRATION	.1	-	.2	.1	.1	.1
SMITHSONIAN INSTITUTION	18.3	20.9	27.2	20.3	23.7	29.7
TENNESSEE VALLEY AUTHORITY	8.2	9.4	10.4	8.2	9.4	10.4
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY	4.2	3.1	3.5	5.9	4.2	4.0
UNITED STATES INFORMATION AGENCY	.2	.2	.2	.2	.2	.2
VETERANS ADMINISTRATION	61.2	76.6	63.2	61.7	67.0	71.7

TABLE C-3. FEDERAL FUNDS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(MILLIONS OF DOLLARS)

AGENCY AND SUBDIVISION	OBLIGATIONS			EXPENDITURES		
		ESTIMATES			ESTIMATES	
	ACTUAL,1970	1971	1972	ACTUAL,1970	1971	1972
TOTAL, ALL AGENCIES	15,329.8	15,387.2	16,661.5	15,157.0	15,327.0	15,673.0
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL	281.2	302.8	314.0	285.0	306.3	311.4
AGRICULTURAL RESEARCH SERVICE	160.6	172.3	176.8	161.3	172.1	172.6
COOPERATIVE STATE RESEARCH SERVICE	61.1	67.0	73.6	61.1	69.4	73.2
ECONOMIC RESEARCH SERVICE	14.9	15.7	15.4	15.8	15.2	14.9
FARMER COOPERATIVE SERVICE	.9	.9	.9	.9	1.0	1.0
FOREST SERVICE	42.8	45.9	46.3	44.9	47.7	48.6
NATIONAL AGRICULTURAL LIBRARY	.2	.3	.3	.3	.3	.3
STATISTICAL REPORTING SERVICE	.7	.7	.7	.7	.7	.7
DEPARTMENT OF COMMERCE, TOTAL	121.6	157.9	181.7	122.9	137.9	157.4
BUREAU OF THE CENSUS	3.0	4.3	3.5	3.0	4.3	3.5
ECONOMIC DEVELOPMENT ADMINISTRATION	8.8	5.4	5.1	10.4	5.7	5.4
MARITIME ADMINISTRATION	12.6	24.3	26.0	6.9	12.1	22.0
NATIONAL BUREAU OF STANDARDS	29.6	31.7	34.1	29.1	31.3	33.9
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	63.8	85.0	102.9	69.4	78.0	82.7
OFFICE OF BUSINESS ECONOMICS	3.5	4.0	4.5	3.7	3.8	4.4
OFFICE OF TELECOMMUNICATIONS	-	2.6	5.0	-	2.3	4.9
PATENT OFFICE	.4	.6	.6	.4	.5	.6
DEPARTMENT OF DEFENSE, TOTAL	7,360.4	7,420.2	8,332.0	7,447.1	7,563.6	7,758.7
DEPARTMENT OF THE ARMY	1,659.8	1,691.1	2,071.4	1,753.5	1,720.7	1,855.6
MILITARY FUNCTIONS	1,650.3	1,681.6	2,059.3	1,744.0	1,711.4	1,842.9
RDT&E APPROPRIATIONS	1,571.0	1,599.6	1,986.4	1,663.3	1,631.5	1,770.0
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	79.4	82.0	73.0	80.7	79.9	72.9
CIVIL FUNCTIONS	9.5	9.5	12.1	9.5	9.3	12.6
DEPARTMENT OF THE NAVY	2,257.9	2,236.9	2,515.3	2,150.8	2,241.0	2,320.3
RDT&E APPROPRIATIONS	2,183.4	2,164.7	2,444.4	2,076.8	2,168.8	2,251.6
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	73.4	71.3	67.7	73.4	71.2	67.5
SPECIAL FOREIGN CURRENCY PROGRAM	1.1	.9	3.2	.6	.9	1.2
DEPARTMENT OF THE AIR FORCE	2,990.0	3,024.6	3,209.0	3,088.5	3,123.3	3,088.1
RDT&E APPROPRIATIONS	2,787.4	2,829.9	3,037.2	2,886.0	2,928.9	2,916.2
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	202.5	194.3	171.8	202.5	194.3	171.8
SPECIAL FOREIGN CURRENCY PROGRAM	.1	.4	-	.1	.1	.1
DEFENSE AGENCIES	448.6	414.0	482.6	448.4	459.1	446.0
RDT&E APPROPRIATIONS	442.6	409.3	478.2	442.4	454.3	441.5
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	5.9	4.7	4.4	5.9	4.7	4.4
DEPARTMENTWIDE FUNDS	4.1	53.6	53.7	5.9	19.6	48.8

NATIONAL AGRICULTURAL LIBRARY	.2	.3	.3	.3	.3	.3
STATISTICAL REPORTING SERVICE	.7	.7	.7	.7	.7	.7
DEPARTMENT OF COMMERCE, TOTAL	121.6	157.9	181.7	122.9	137.9	157.4
BUREAU OF THE CENSUS	3.0	4.3	3.5	3.0	4.3	3.5
ECONOMIC DEVELOPMENT ADMINISTRATION	8.8	5.4	5.1	10.4	5.7	5.4
MARITIME ADMINISTRATION	12.6	24.3	26.0	6.9	12.1	22.0
NATIONAL BUREAU OF STANDARDS	29.6	31.7	34.1	29.1	31.3	33.9
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	63.8	85.0	102.9	69.4	78.0	82.7
OFFICE OF BUSINESS ECONOMICS	3.5	4.0	4.5	3.7	3.8	4.4
OFFICE OF TELECOMMUNICATIONS	-	2.6	5.0	-	2.3	4.9
PATENT OFFICE	.4	.6	.6	.4	.5	.6
DEPARTMENT OF DEFENSE, TOTAL	7,360.4	7,420.2	8,332.0	7,447.1	7,563.6	7,758.7
DEPARTMENT OF THE ARMY	1,659.8	1,691.1	2,071.4	1,753.5	1,720.7	1,855.6
MILITARY FUNCTIONS	1,650.3	1,681.6	2,059.3	1,744.0	1,711.4	1,842.9
RDT&E APPROPRIATIONS	1,571.0	1,599.6	1,986.4	1,663.3	1,631.5	1,770.0
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	79.4	82.0	73.0	80.7	79.9	72.9
CIVIL FUNCTIONS	9.5	9.5	12.1	9.5	9.3	12.6
DEPARTMENT OF THE NAVY	2,257.9	2,236.9	2,515.3	2,150.8	2,241.0	2,320.3
RDT&E APPROPRIATIONS	2,183.4	2,164.7	2,444.4	2,076.8	2,168.8	2,251.6
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	73.4	71.3	67.7	73.4	71.2	67.5
SPECIAL FOREIGN CURRENCY PROGRAM	1.1	.9	3.2	.6	.9	1.2
DEPARTMENT OF THE AIR FORCE	2,990.0	3,024.6	3,209.0	3,088.5	3,123.3	3,088.1
RDT&E APPROPRIATIONS	2,787.4	2,829.9	3,037.2	2,886.0	2,928.9	2,916.2
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	202.5	194.3	171.8	202.5	194.3	171.8
SPECIAL FOREIGN CURRENCY PROGRAM	.1	.4	-	.1	.1	.1
DEFENSE AGENCIES	448.6	414.0	482.6	448.4	459.1	446.0
RDT&E APPROPRIATIONS	442.6	409.3	478.2	442.4	454.3	441.5
PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D	5.9	4.7	4.4	5.9	4.7	4.4
DEPARTMENTWIDE FUNDS	4.1	53.6	53.7	5.9	19.6	48.8
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	1,221.0	1,479.9	1,635.4	1,217.9	1,336.7	1,475.7
FOOD AND DRUG ADMINISTRATION	21.8	25.9	33.9	18.7	22.6	29.0
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	188.4	227.7	229.5	180.2	203.2	217.5
NATIONAL INSTITUTES OF HEALTH	873.3	1,038.5	1,168.5	876.6	964.7	1,042.8
OFFICE OF CHILD DEVELOPMENT	2.0	5.5	16.5	1.0	2.5	10.5
OFFICE OF EDUCATION	88.2	133.2	138.4	92.7	96.2	134.0
SOCIAL AND REHABILITATION SERVICE	34.9	35.6	34.4	36.6	34.5	28.5
SOCIAL SECURITY ADMINISTRATION	12.4	13.5	14.3	12.2	13.0	13.3
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	29.9	49.4	49.0	15.3	53.9	48.9
DEPARTMENT OF THE INTERIOR, TOTAL	157.9	185.1	204.3	151.6	180.7	193.7
BONNEVILLE POWER ADMINISTRATION	1.8	2.7	3.1	2.1	2.7	3.0
BUREAU OF LAND MANAGEMENT	.7	.8	.8	.7	.8	.8
BUREAU OF MINES	46.5	58.0	66.8	37.3	58.2	66.6
BUREAU OF OUTDOOR RECREATION	.1	.1	.1	.1	.1	.1
BUREAU OF RECLAMATION	7.3	9.1	9.6	7.5	9.6	9.6
BUREAU OF SPORT FISHERIES AND WILDLIFE	20.0	22.2	23.2	18.0	19.7	19.7
GEOLOGICAL SURVEY	41.0	43.2	48.5	40.8	42.8	47.5
OFFICE OF COAL RESEARCH	5.7	12.4	12.3	10.3	8.5	9.0
OFFICE OF SALINE WATER	24.1	23.4	24.8	23.3	27.0	24.3
OFFICE OF THE SECRETARY	-	.8	1.6	-	.5	1.5
OFFICE OF WATER RESOURCES RESEARCH	10.8	12.4	13.5	11.4	10.9	11.7
DEPARTMENT OF JUSTICE, TOTAL	8.6	10.1	23.9	3.6	12.6	20.0
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	.8	1.6	2.2	.8	1.4	2.1
BUREAU OF PRISONS	.2	.2	.3	.2	.2	.2
FEDERAL BUREAU OF INVESTIGATION	.2	.8	.5	.2	.6	.6
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION	7.4	7.5	21.0	2.5	10.3	17.1

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TABLE C-3. FEDERAL FUNDS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

CONTINUED

(MILLIONS OF DOLLARS)

AGENCY AND SUBDIVISION	OBLIGATIONS			EXPENDITURES		
		ESTIMATES			ESTIMATES	
	ACTUAL,1970	1971	1972	ACTUAL,1970	1971	1972
DEPARTMENT OF LABOR, TOTAL	20.6	24.5	24.9	19.8	23.9	24.6
BUREAU OF LABOR STATISTICS	3.8	3.8	3.8	3.8	3.7	3.7
LABOR-MANAGEMENT SERVICES ADMINISTRATION	.3	.7	.8	.3	.7	.8
MANPOWER ADMINISTRATION	14.3	17.4	17.7	13.7	16.9	17.5
WORKPLACE STANDARDS ADMINISTRATION	2.2	2.6	2.5	2.0	2.5	2.5
POSTAL SERVICE	38.7	45.1	76.3	29.7	37.2	45.9
DEPARTMENT OF STATE, TOTAL	27.6	40.5	44.1	21.4	27.3	30.5
DEPARTMENTAL FUNDS	.1	.4	.7	.1	.4	.7
AGENCY FOR INTERNATIONAL DEVELOPMENT	27.3	40.0	43.5	20.9	26.7	29.8
PEACE CORPS	.1	.1	-	.4	.2	-
DEPARTMENT OF TRANSPORTATION, TOTAL	317.3	436.7	483.2	258.9	403.6	526.8
FEDERAL AVIATION ADMINISTRATION	56.1	79.0	81.5	53.7	57.9	94.3
FEDERAL HIGHWAY ADMINISTRATION	32.8	32.3	37.8	32.4	34.4	39.8
FEDERAL RAILROAD ADMINISTRATION	11.5	19.7	18.3	8.4	11.6	15.6
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION	19.5	16.7	27.5	19.5	16.7	27.5
OFFICE OF THE SECRETARY	169.5	249.1	266.0	118.7	245.5	295.5
UNITED STATES COAST GUARD	18.4	25.6	31.8	16.7	23.3	33.9
URBAN MASS TRANSPORTATION ADMINISTRATION	9.5	14.3	20.4	9.5	14.3	20.4
DEPARTMENT OF THE TREASURY, TOTAL	.6	.9	.9	.6	.9	.9
BUREAU OF ENGRAVING AND PRINTING	.6	.9	.9	.6	.9	.9
OTHER AGENCIES						
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS	.6	.5	.5	.6	.5	.5
ATOMIC ENERGY COMMISSION	1,346.0	1,306.6	1,251.4	1,346.0	1,306.6	1,251.4
CIVIL AERONAUTICS BOARD	.3	.3	.3	.3	.3	.3
CIVIL SERVICE COMMISSION	.4	.5	.5	.4	.5	.5
ENVIRONMENTAL PROTECTION AGENCY	88.5	116.2	144.4	68.1	89.0	104.2
FEDERAL COMMUNICATIONS COMMISSION	1.0	.6	.9	1.0	.7	.7
FEDERAL HOME LOAN BANK BOARD	.4	.4	.5	.4	.4	.5
FEDERAL TRADE COMMISSION	.4	.5	.5	.4	.5	.5
GENERAL SERVICES ADMINISTRATION	.3	.3	.2	.3	.3	.2
LIBRARY OF CONGRESS	1.9	2.5	3.9	1.9	2.1	3.9
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	3,799.9	3,247.7	3,188.5	3,696.5	3,318.4	3,109.4
NATIONAL SCIENCE FOUNDATION	289.0	345.0	494.3	292.9	330.4	403.0
OFFICE OF ECONOMIC OPPORTUNITY	123.4	115.6	100.0	79.3	90.8	95.0
OFFICE OF EMERGENCY PREPAREDNESS	1.0	1.0	.5	.7	1.6	.5
OFFICE OF SCIENCE AND TECHNOLOGY	1.9	2.0	2.2	1.9	2.0	2.2
SMALL BUSINESS ADMINISTRATION	.1	-	.2	.1	.1	.1
SMITHSONIAN INSTITUTION	18.2	20.3	27.2	20.1	23.5	29.3
TENNESSEE VALLEY AUTHORITY	8.2	9.3	10.2	8.2	9.3	10.2
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY	4.2	3.1	3.5	5.9	4.2	4.0
UNITED STATES INFORMATION AGENCY	.2	.2	.2	.2	.2	.2
VETERANS ADMINISTRATION	58.6	61.6	61.9	58.0	61.2	61.9

TABLE C-4. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	RESEARCH		DEVELOPMENT
		BASIC	APPLIED	
TOTAL, ALL AGENCIES	15,329,816	2,062,256	3,539,650	9,727,910
DEPARTMENTS				
DEPARTMENT OF AGRICULTURE, TOTAL	281,157	115,709	156,216	9,232
AGRICULTURAL RESEARCH SERVICE	160,635	73,342	79,126	8,167
COOPERATIVE STATE RESEARCH SERVICE	61,052	23,200	37,852	-
ECONOMIC RESEARCH SERVICE	14,904	4,322	10,582	-
FARMER COOPERATIVE SERVICE	884	221	663	-
FOREST SERVICE	42,789	14,548	27,385	856
NATIONAL AGRICULTURAL LIBRARY	208	-	208	-
STATISTICAL REPORTING SERVICE	685	76	400	209
DEPARTMENT OF COMMERCE, TOTAL	121,571	39,201	54,913	27,457
BUREAU OF THE CENSUS	3,038	308	1,357	1,373
ECONOMIC DEVELOPMENT ADMINISTRATION	8,762	-	3,809	4,953
MARITIME ADMINISTRATION	12,551	-	4,878	7,673
NATIONAL BUREAU OF STANDARDS	29,565	14,350	12,705	2,510
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	63,753	21,038	31,877	10,838
OFFICE OF BUSINESS ECONOMICS	3,505	3,505	-	-
PATENT OFFICE	397	-	287	110
DEPARTMENT OF DEFENSE, TOTAL	7,360,368	246,670	1,310,113	5,803,585
DEPARTMENT OF THE ARMY	1,659,818	45,451	246,085	1,368,282
DEPARTMENT OF THE NAVY	2,257,908	81,944	190,978	1,984,986
DEPARTMENT OF THE AIR FORCE	2,989,957	81,000	584,000	2,324,957
DEFENSE AGENCIES	448,594	38,275	284,959	125,360
DEPARTMENTWIDE FUNDS	4,091	-	4,091	-
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	1,220,975	387,940	741,331	91,704
FOOD AND DRUG ADMINISTRATION	21,805	-	21,805	-
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	188,412	60,340	100,018	28,054
NATIONAL INSTITUTES OF HEALTH	873,273	319,385	549,403	4,485
OFFICE OF CHILD DEVELOPMENT	2,000	-	1,000	1,000
OFFICE OF EDUCATION	88,181	7,812	25,254	55,115
SOCIAL AND REHABILITATION SERVICE	34,935	-	31,885	3,050
SOCIAL SECURITY ADMINISTRATION	12,369	403	11,966	-
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	29,940	-	7,097	22,843
DEPARTMENT OF THE INTERIOR, TOTAL	157,908	49,923	71,769	36,216
BONNEVILLE POWER ADMINISTRATION	1,793	-	524	1,269
BUREAU OF LAND MANAGEMENT	732	15	695	22
BUREAU OF MINES	46,457	6,248	27,646	12,563
BUREAU OF OUTDOOR RECREATION	92	-	92	-
BUREAU OF RECLAMATION	7,310	82	7,120	108
BUREAU OF SPORT FISHERIES AND WILDLIFE	20,008	8,459	9,582	1,967
GEOLOGICAL SURVEY	40,963	30,667	10,296	-
OFFICE OF COAL RESEARCH	5,671	-	2,341	3,330
OFFICE OF SALINE WATER	24,132	2,174	5,001	16,957
OFFICE OF WATER RESOURCES RESEARCH	10,750	2,278	8,472	-
DEPARTMENT OF JUSTICE, TOTAL	8,590	-	5,334	3,256
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	839	-	839	-
BUREAU OF PRISONS	200	-	-	200
FEDERAL BUREAU OF INVESTIGATION	197	-	-	197
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION	7,354	-	4,495	2,859

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TABLE C-4. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK, FISCAL YEAR 1970

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	RESEARCH		DEVELOPMENT
		BASIC	APPLIED	
DEPARTMENT OF LABOR, TOTAL	20,587	2,052	9,234	9,301
BUREAU OF LABOR STATISTICS	3,815	1,422	1,144	1,249
LABOR-MANAGEMENT SERVICES ADMINISTRATION	290	290	-	-
MANPOWER ADMINISTRATION	14,266	340	5,874	8,052
WORKPLACE STANDARDS ADMINISTRATION	2,216	-	2,216	-
POSTAL SERVICE	38,680	-	4,577	34,103
DEPARTMENT OF STATE, TOTAL	27,558	-	18,895	8,663
DEPARTMENTAL FUNDS	125	-	125	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	27,288	-	18,627	8,661
PEACE CORPS	145	-	143	2
DEPARTMENT OF TRANSPORTATION, TOTAL	317,322	21,099	67,164	229,059
FEDERAL AVIATION ADMINISTRATION	56,087	-	9,960	46,127
FEDERAL HIGHWAY ADMINISTRATION	32,845	7,390	21,218	4,237
FEDERAL RAILROAD ADMINISTRATION	11,540	-	4,743	6,797
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION	19,492	1,127	14,765	3,600
OFFICE OF THE SECRETARY	169,476	-	8,956	160,520
UNITED STATES COAST GUARD	18,389	11,080	2,801	4,508
URBAN MASS TRANSPORTATION ADMINISTRATION	9,493	1,502	4,721	3,270
DEPARTMENT OF THE TREASURY, TOTAL	610	-	286	324
BUREAU OF ENGRAVING AND PRINTING	610	-	286	324
OTHER AGENCIES				
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS	553	-	553	-
ATOMIC ENERGY COMMISSION	1,345,989	286,669	146,448	912,872
CIVIL AERONAUTICS BOARD	263	-	263	-
CIVIL SERVICE COMMISSION	448	83	196	169
ENVIRONMENTAL PROTECTION AGENCY	88,506	5,450	47,534	35,522
FEDERAL COMMUNICATIONS COMMISSION	1,015	-	1,015	-
FEDERAL HOME LOAN BANK BOARD	390	-	390	-
FEDERAL TRADE COMMISSION	388	-	388	-
GENERAL SERVICES ADMINISTRATION	325	-	215	110
LIBRARY OF CONGRESS	1,932	-	968	964
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	3,799,946	637,034	772,698	2,390,214
NATIONAL SCIENCE FOUNDATION	288,978	244,977	29,812	14,189
OFFICE OF ECONOMIC OPPORTUNITY	123,383	1,600	27,800	93,983
OFFICE OF EMERGENCY PREPAREDNESS	1,016	-	1,016	-
OFFICE OF SCIENCE AND TECHNOLOGY	1,858	372	557	929
SMALL BUSINESS ADMINISTRATION	101	-	101	-
SMITHSONIAN INSTITUTION	18,217	18,217	-	-
TENNESSEE VALLEY AUTHORITY	8,151	-	6,376	1,775
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY	4,245	-	3,732	513
UNITED STATES INFORMATION AGENCY	234	-	157	77
VETERANS ADMINISTRATION	58,612	5,260	52,502	850

TABLE C-5. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	RESEARCH		DEVELOPMENT
		BASIC	APPLIED	
TOTAL, ALL AGENCIES	15,387,209	2,165,031	3,830,092	9,392,086
DEPARTMENTS				
DEPARTMENT OF AGRICULTURE, TOTAL	302,757	122,780	169,830	10,147
AGRICULTURAL RESEARCH SERVICE	172,296	76,861	86,420	9,015
COOPERATIVE STATE RESEARCH SERVICE	66,999	25,460	41,539	-
ECONOMIC RESEARCH SERVICE	15,688	4,550	11,138	-
FARMER COOPERATIVE SERVICE	945	236	709	-
FOREST SERVICE	45,867	15,595	29,355	917
NATIONAL AGRICULTURAL LIBRARY	259	-	259	-
STATISTICAL REPORTING SERVICE	703	78	410	215
DEPARTMENT OF COMMERCE, TOTAL	157,861	49,634	78,416	29,811
BUREAU OF THE CENSUS	4,259	406	1,759	2,094
ECONOMIC DEVELOPMENT ADMINISTRATION	5,446	-	1,844	3,602
MARITIME ADMINISTRATION	24,300	-	17,493	6,807
NATIONAL BUREAU OF STANDARDS	31,656	15,018	13,884	2,754
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	84,994	28,048	42,497	14,449
OFFICE OF BUSINESS ECONOMICS	4,004	4,004	-	-
OFFICE OF TELECOMMUNICATIONS	2,642	2,158	484	-
PATENT OFFICE	560	-	455	105
DEPARTMENT OF DEFENSE, TOTAL	7,420,217	243,037	1,236,296	5,940,884
DEPARTMENT OF THE ARMY	1,691,115	46,597	209,661	1,434,857
DEPARTMENT OF THE NAVY	2,236,894	85,040	182,960	1,968,894
DEPARTMENT OF THE AIR FORCE	3,024,615	80,000	564,000	2,380,615
DEFENSE AGENCIES	414,041	31,400	276,123	106,518
DEPARTMENTWIDE FUNDS	53,552	-	3,552	50,000
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	1,479,937	451,822	910,400	117,715
FOOD AND DRUG ADMINISTRATION	25,922	-	25,922	-
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	227,726	66,711	122,575	38,440
NATIONAL INSTITUTES OF HEALTH	1,038,487	372,369	658,338	7,780
OFFICE OF CHILD DEVELOPMENT	5,500	-	2,000	3,500
OFFICE OF EDUCATION	133,215	12,317	56,283	64,615
SOCIAL AND REHABILITATION SERVICE	35,580	-	32,200	3,380
SOCIAL SECURITY ADMINISTRATION	13,507	425	13,082	-
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	49,425	-	11,862	37,563
DEPARTMENT OF THE INTERIOR, TOTAL	185,082	50,657	83,904	50,521
BONNEVILLE POWER ADMINISTRATION	2,659	-	474	2,185
BUREAU OF LAND MANAGEMENT	779		755	24
BUREAU OF MINES	58,049	6,457	31,599	19,993
BUREAU OF OUTDOOR RECREATION	133	-	133	-
BUREAU OF RECLAMATION	9,121	44	8,974	103
BUREAU OF SPORT FISHERIES AND WILDLIFE	22,158	9,551	10,581	2,026
GEOLOGICAL SURVEY	43,196	30,381	12,815	-
OFFICE OF COAL RESEARCH	12,377	-	4,809	7,568
OFFICE OF SALINE WATER	23,410	1,600	3,400	18,410
OFFICE OF THE SECRETARY	795	-	583	212
OFFICE OF WATER RESOURCES RESEARCH	12,405	2,624	9,781	-
DEPARTMENT OF JUSTICE, TOTAL	10,055	-	6,210	3,845
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	1,560	-	1,560	-
BUREAU OF PRISONS	200	-	-	200
FEDERAL BUREAU OF INVESTIGATION	795	-	-	795
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION	7,500	-	4,650	2,850

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TABLE C-5. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK, FISCAL YEAR 1971 (ESTIMATED)

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	RESEARCH		DEVELOPMENT
		BASIC	APPLIED	
DEPARTMENT OF LABOR, TOTAL	24,475	2,578	9,917	11,980
BUREAU OF LABOR STATISTICS	3,767	1,461	1,154	1,152
LABOR-MANAGEMENT SERVICES ADMINISTRATION	720	720	-	-
MANPOWER ADMINISTRATION	17,438	397	6,213	10,828
WORKPLACE STANDARDS ADMINISTRATION	2,550	-	2,550	-
POSTAL SERVICE	45,147	-	5,568	39,579
DEPARTMENT OF STATE, TOTAL	40,463	-	25,359	15,104
DEPARTMENTAL FUNDS	350	-	350	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	40,010	-	24,906	15,104
PEACE CORPS	103	-	103	-
DEPARTMENT OF TRANSPORTATION, TOTAL	436,749	20,607	90,288	325,854
FEDERAL AVIATION ADMINISTRATION	79,018	-	23,018	56,000
FEDERAL HIGHWAY ADMINISTRATION	32,316	6,463	21,005	4,848
FEDERAL RAILROAD ADMINISTRATION	19,717	-	9,846	9,871
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION	16,672	1,100	11,972	3,600
OFFICE OF THE SECRETARY	249,113	-	15,594	233,519
UNITED STATES COAST GUARD	25,631	11,542	4,389	9,700
URBAN MASS TRANSPORTATION ADMINISTRATION	14,282	1,502	4,464	8,316
DEPARTMENT OF THE TREASURY, TOTAL	945	-	373	572
BUREAU OF ENGRAVING AND PRINTING	945	-	373	572
OTHER AGENCIES				
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS	477	-	477	-
ATOMIC ENERGY COMMISSION	1,306,563	278,118	145,297	883,148
CIVIL AERONAUTICS BOARD	270	-	270	-
CIVIL SERVICE COMMISSION	498	106	221	171
ENVIRONMENTAL PROTECTION AGENCY	116,167	5,941	55,541	54,685
FEDERAL COMMUNICATIONS COMMISSION	638	-	638	-
FEDERAL HOME LOAN BANK BOARD	388	-	388	-
FEDERAL TRADE COMMISSION	467	-	467	-
GENERAL SERVICES ADMINISTRATION	251	-	83	168
LIBRARY OF CONGRESS	2,515	-	1,006	1,509
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	3,247,746	626,068	851,515	1,770,163
NATIONAL SCIENCE FOUNDATION	345,001	285,136	42,150	17,715
OFFICE OF ECONOMIC OPPORTUNITY	115,600	2,400	36,750	76,450
OFFICE OF EMERGENCY PREPAREDNESS	995	-	995	-
OFFICE OF SCIENCE AND TECHNOLOGY	1,980	396	594	990
SMITHSONIAN INSTITUTION	20,346	20,346	-	-
TENNESSEE VALLEY AUTHORITY	9,335	-	7,478	1,857
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY	3,064	-	2,335	729
UNITED STATES INFORMATION AGENCY	186	-	160	26
VETERANS ADMINISTRATION	61,609	5,405	55,304	900

TABLE C-6. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	RESEARCH		DEVELOPMENT
		BASIC	APPLIED	
TOTAL, ALL AGENCIES	16,661,508	2,399,104	4,244,480	10,017,924
DEPARTMENTS				
DEPARTMENT OF AGRICULTURE, TOTAL	314,014	127,585	175,885	10,544
AGRICULTURAL RESEARCH SERVICE	176,781	79,088	88,290	9,403
COOPERATIVE STATE RESEARCH SERVICE	73,602	27,969	45,633	-
ECONOMIC RESEARCH SERVICE	15,428	4,474	10,954	-
FARMER COOPERATIVE SERVICE	943	236	707	-
FOREST SERVICE	46,294	15,740	29,628	926
NATIONAL AGRICULTURAL LIBRARY	263	-	263	-
STATISTICAL REPORTING SERVICE	703	78	410	215
DEPARTMENT OF COMMERCE, TOTAL	181,720	57,730	86,042	37,948
BUREAU OF THE CENSUS	3,535	406	1,498	1,631
ECONOMIC DEVELOPMENT ADMINISTRATION	5,111	-	1,591	3,520
MARITIME ADMINISTRATION	26,000	-	14,445	11,555
NATIONAL BUREAU OF STANDARDS	34,131	15,341	15,139	3,651
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	102,860	33,944	51,430	17,486
OFFICE OF BUSINESS ECONOMICS	4,508	4,508	-	-
OFFICE OF TELECOMMUNICATIONS	5,000	3,531	1,469	-
PATENT OFFICE	575	-	470	105
DEPARTMENT OF DEFENSE, TOTAL	8,332,044	245,486	1,388,076	6,698,482
DEPARTMENT OF THE ARMY	2,071,429	46,639	233,789	1,791,001
DEPARTMENT OF THE NAVY	2,515,274	88,747	203,253	2,223,274
DEPARTMENT OF THE AIR FORCE	3,209,010	81,000	617,000	2,511,010
DEFENSE AGENCIES	482,631	29,100	330,334	123,197
DEPARTMENTWIDE FUNDS	53,700	-	3,700	50,000
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	1,635,425	487,842	1,001,916	145,667
FOOD AND DRUG ADMINISTRATION	33,916	-	33,916	-
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	229,491	68,810	119,681	41,000
NATIONAL INSTITUTES OF HEALTH	1,168,461	407,337	747,085	14,039
OFFICE OF CHILD DEVELOPMENT	16,500	-	3,500	13,000
OFFICE OF EDUCATION	138,376	11,215	51,998	75,163
SOCIAL AND REHABILITATION SERVICE	34,395	-	31,930	2,465
SOCIAL SECURITY ADMINISTRATION	14,286	480	13,806	-
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	49,000	-	12,740	36,260
DEPARTMENT OF THE INTERIOR, TOTAL	204,289	53,114	91,252	59,923
BONNEVILLE POWER ADMINISTRATION	3,093	-	495	2,598
BUREAU OF LAND MANAGEMENT	817	-	793	24
BUREAU OF MINES	66,760	7,686	31,855	27,219
BUREAU OF OUTDOOR RECREATION	76	-	76	-
BUREAU OF RECLAMATION	9,638	30	9,493	115
BUREAU OF SPORT FISHERIES AND WILDLIFE	23,212	9,712	11,446	2,054
GEOLOGICAL SURVEY	48,530	31,024	17,506	-
OFFICE OF COAL RESEARCH	12,300	-	4,059	8,241
OFFICE OF SALINE WATER	24,750	1,700	3,775	19,275
OFFICE OF THE SECRETARY	1,590	-	1,193	397
OFFICE OF WATER RESOURCES RESEARCH	13,523	2,962	10,561	-
DEPARTMENT OF JUSTICE, TOTAL	23,905	-	15,162	8,743
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	2,162	-	2,162	-
BUREAU OF PRISONS	293	-	-	293
FEDERAL BUREAU OF INVESTIGATION	450	-	-	450
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION	21,000	-	13,000	8,000

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TABLE C-6. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK, FISCAL YEAR 1972 (ESTIMATED)

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	RESEARCH		DEVELOPMENT
		BASIC	APPLIED	
DEPARTMENT OF LABOR, TOTAL	24,862	2,712	9,930	12,220
BUREAU OF LABOR STATISTICS	3,769	1,463	1,154	1,152
LABOR-MANAGEMENT SERVICES ADMINISTRATION	812	812	-	-
MANPOWER ADMINISTRATION	17,748	437	6,243	11,068
WORKPLACE STANDARDS ADMINISTRATION	2,533	-	2,533	-
POSTAL SERVICE	76,267	-	5,860	70,407
DEPARTMENT OF STATE, TOTAL	44,143	-	28,204	15,939
DEPARTMENTAL FUNDS	650	-	650	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	43,493	-	27,554	15,939
DEPARTMENT OF TRANSPORTATION, TOTAL	483,193	22,949	161,000	299,244
FEDERAL AVIATION ADMINISTRATION	81,547	-	60,371	21,176
FEDERAL HIGHWAY ADMINISTRATION	37,821	7,564	24,584	5,673
FEDERAL RAILROAD ADMINISTRATION	18,260	-	10,500	7,760
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION	27,450	1,900	21,050	4,500
OFFICE OF THE SECRETARY	266,000	-	31,000	235,000
UNITED STATES COAST GUARD	31,763	11,983	8,585	11,195
URBAN MASS TRANSPORTATION ADMINISTRATION	20,352	1,502	4,910	13,940
DEPARTMENT OF THE TREASURY, TOTAL	908	-	390	518
BUREAU OF ENGRAVING AND PRINTING	908	-	390	518
OTHER AGENCIES				
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS	487	-	487	-
ATOMIC ENERGY COMMISSION	1,251,387	266,359	145,025	840,003
CIVIL AERONAUTICS BOARD	331	-	331	-
CIVIL SERVICE COMMISSION	533	113	237	183
ENVIRONMENTAL PROTECTION AGENCY	144,386	8,428	70,302	65,656
FEDERAL COMMUNICATIONS COMMISSION	869	-	869	-
FEDERAL HOME LOAN BANK BOARD	497	-	497	-
FEDERAL TRADE COMMISSION	460	-	460	-
GENERAL SERVICES ADMINISTRATION	202	-	20	182
LIBRARY OF CONGRESS	3,916	-	1,175	2,741
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	3,188,455	688,371	873,546	1,626,538
NATIONAL SCIENCE FOUNDATION	494,286	399,636	70,400	24,250
OFFICE OF ECONOMIC OPPORTUNITY	100,000	5,500	37,100	57,400
OFFICE OF EMERGENCY PREPAREDNESS	535	-	535	-
OFFICE OF SCIENCE AND TECHNOLOGY	2,160	432	648	1,080
SMALL BUSINESS ADMINISTRATION	205	-	205	-
SMITHSONIAN INSTITUTION	27,247	27,247	-	-
TENNESSEE VALLEY AUTHORITY	10,167	-	8,197	1,970
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY	3,496	-	2,420	1,076
UNITED STATES INFORMATION AGENCY	200	-	150	50
VETERANS ADMINISTRATION	61,919	5,600	55,419	900

TABLE C-7. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

(MILLIONS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	
TOTAL, ALL AGENCIES....................	15,329.8	3,875.5	7,950.6	430.7	1,472.9	749.7	462.4	249.1	98.7	40.2
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	281.2	208.4	1.3	-	64.8	-	1.2	-	*	5.5
AGRICULTURAL RESEARCH SERVICE..........	160.6	148.7	1.1	-	5.1	-	.9	-	-	4.9
COOPERATIVE STATE RESEARCH SERVICE.....	61.1	2.1	-	-	58.7	-	.3	-	-	-
ECONOMIC RESEARCH SERVICE..............	14.9	14.7	*	-	.2	-	-	-	*	-
FARMER COOPERATIVE SERVICE.............	.9	.9	-	-	*	-	-	-	-	-
FOREST SERVICE.........................	42.8	41.4	*	-	.7	-	-	-	*	.6
NATIONAL AGRICULTURAL LIBRARY..........	.2	.1	.1	-	*	-	-	-	-	-
STATISTICAL REPORTING SERVICE..........	.7	.5	.1	-	.1	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	121.6	88.2	17.7	-	4.5	-	1.2	*	8.5	1.6
BUREAU OF THE CENSUS...................	3.0	3.0	-	-	.1	-	-	-	-	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	8.8	1.4	1.7	-	1.5	-	.3	-	3.8	-
MARITIME ADMINISTRATION................	12.6	.5	11.8	-	.2	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	29.6	28.5	-	-	.4	-	-	-	-	.7
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	63.8	50.9	4.2	-	2.3	-	.8	-	4.7	.9
OFFICE OF BUSINESS ECONOMICS...........	3.5	3.5	-	-	-	-	-	-	-	-
PATENT OFFICE..........................	.4	.4	-	-	-	-	-	*	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	7,360.4	1,995.6	4,737.3	15.1	213.5	139.9	93.5	154.8	.5	10.2
DEPARTMENT OF THE ARMY.................	1,659.8	629.5	933.4	-	31.3	26.6	20.7	14.9	.5	3.0
DEPARTMENT OF THE NAVY.................	2,257.9	708.5	1,393.6	-	73.9	65.5	12.7	*	-	3.7
DEPARTMENT OF THE AIR FORCE............	2,990.0	525.9	2,205.4	-	70.1	26.4	47.3	113.6	-	1.3
DEFENSE AGENCIES.......................	448.6	131.0	203.6	15.0	37.9	21.4	11.8	25.7	-	2.2
DEPARTMENTWIDE FUNDS...................	4.1	.6	1.4	.1	.4	*	1.1	.5	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	1,221.0	246.6	43.7	-	646.6	8.0	184.4	27.7	48.4	15.6
FOOD AND DRUG ADMINISTRATION...........	21.8	13.4	.2	-	4.6	-	1.0	-	2.2	.5
HEALTH SERVICES & MENTAL HEALTH ADMIN..	188.4	49.5	5.9	-	82.9	-	30.3	-	16.8	2.9
NATIONAL INSTITUTES OF HEALTH..........	873.3	165.6	36.0	-	517.8	.1	121.4	.7	22.0	9.8
OFFICE OF CHILD DEVELOPMENT............	2.0	.1	-	-	1.7	-	.3	-	-	-
OFFICE OF EDUCATION....................	88.2	4.9	1.4	-	22.9	7.9	21.6	27.0	2.3	*
SOCIAL AND REHABILITATION SERVICE......	34.9	1.0	-	-	16.5	-	9.8	-	5.2	2.4
SOCIAL SECURITY ADMINISTRATION.........	12.4	12.0	.1	-	.2	-	*	-	-	-
DEPARTMENT OF HOUSING & URBAN DEVELOP..	29.9	3.7	20.7	.3	.5	-	3.1	.2	1.4	-
DEPARTMENT OF THE INTERIOR, TOTAL......	157.9	100.4	26.3	1.4	18.5	-	2.5	.1	8.6	*
BONNEVILLE POWER ADMINISTRATION........	1.8	.8	.8	-	.1	-	-	-	-	*
BUREAU OF LAND MANAGEMENT..............	.7	.4	-	-	.3	-	-	-	*	-
BUREAU OF MINES........................	46.5	40.7	3.9	-	1.6	-	.2	.1	.1	-
BUREAU OF OUTDOOR RECREATION...........	.1	.1	-	-	-	-	-	-	-	-
BUREAU OF RECLAMATION..................	7.3	2.8	.9	-	3.3	-	-	-	.3	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	20.0	11.3	-	-	.5	-	.2	-	8.1	-
GEOLOGICAL SURVEY......................	41.0	40.0	.4	-	.6	-	-	-	-	-
OFFICE OF COAL RESEARCH................	5.7	.4	3.2	-	.6	-	1.5	-	-	-
OFFICE OF SALINE WATER.................	24.1	3.3	16.6	1.4	2.4	-	.5	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	10.8	.7	.6	-	9.2	-	.2	-	.1	-
DEPARTMENT OF JUSTICE, TOTAL...........	8.6	1.0	1.6	-	1.9	-	.8	-	3.2	-

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TABLE C-7. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

(MILLIONS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRAMURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NONPROFIT INSTITUTIONS	FFRDCS ADMIN. BY NONPROFIT INSTITUTIONS	OTHER	
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	.8	*	-	-	.5	-	.3	-	-	-
BUREAU OF PRISONS	.2	.2	*	-	-	-	*	-	*	-
FEDERAL BUREAU OF INVESTIGATION	.2	.1	.1	-	-	-	-	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN	7.4	.7	1.5	-	1.5	-	.5	-	3.1	-
DEPARTMENT OF LABOR, TOTAL	20.6	9.5	1.4	-	3.6	-	4.1	-	2.0	-
BUREAU OF LABOR STATISTICS	3.8	3.8	-	-	-	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN	.3	.3	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION	14.3	3.1	1.4	-	3.6	-	4.1	-	2.0	-
WORKPLACE STANDARDS ADMINISTRATION	2.2	2.2	-	-	-	-	-	-	-	-
POSTAL SERVICE	38.7	7.5	30.0	-	*	-	*	.8	-	.4
DEPARTMENT OF STATE, TOTAL	27.6	5.5	.2	-	8.2	-	11.2	-	*	2.4
DEPARTMENTAL FUNDS	.1	.1	-	-	*	-	*	-	*	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	27.3	5.4	.1	-	8.2	-	11.1	-	-	2.4
PEACE CORPS	.1	.1	.1	-	*	-	*	-	*	-
DEPARTMENT OF TRANSPORTATION, TOTAL	317.3	64.2	206.4	-	10.9	-	10.3	3.2	22.4	-
FEDERAL AVIATION ADMINISTRATION	56.1	35.1	18.0	-	.7	-	-	2.2	-	-
FEDERAL HIGHWAY ADMINISTRATION	32.8	5.8	3.9	-	.7	-	2.3	-	20.2	-
FEDERAL RAILROAD ADMINISTRATION	11.5	1.1	9.0	-	.5	-	.1	.8	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN	19.5	1.4	7.2	-	5.0	-	4.0	-	1.9	-
OFFICE OF THE SECRETARY	169.5	6.1	161.9	-	.9	-	.4	.1	.1	-
UNITED STATES COAST GUARD	18.4	14.7	3.4	-	.1	-	.2	-	-	-
URBAN MASS TRANSPORTATION ADMIN	9.5	*	3.0	-	3.1	-	3.3	-	.1	-
DEPARTMENT OF THE TREASURY, TOTAL	.6	.6	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING	.6	.6	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ADVISORY COMM ON INTERGOVT RELATIONS	.6	.6	-	-	-	-	-	-	-	-
ATOMIC ENERGY COMMISSION	1,346.0	17.5	300.0	409.6	100.3	448.0	9.7	59.9	.2	.7
CIVIL AERONAUTICS BOARD	.3	.3	-	-	-	-	-	-	-	-
CIVIL SERVICE COMMISSION	.4	.4	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY	88.5	26.2	32.1	-	18.2	1.3	7.3	.3	2.5	.7
FEDERAL COMMUNICATIONS COMMISSION	1.0	.6	.4	-	-	-	-	-	-	-
FEDERAL HOME LOAN BANK BOARD	.4	.3	-	-	.1	-	-	-	-	-
FEDERAL TRADE COMMISSION	.4	.4	-	-	-	-	-	-	-	-
GENERAL SERVICES ADMINISTRATION	.3	.2	.1	-	-	-	*	-	-	-
LIBRARY OF CONGRESS	1.9	1.9	*	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	3,799.9	988.0	2,516.2	4.3	131.2	126.8	31.0	1.0	-	1.4
NATIONAL SCIENCE FOUNDATION	289.0	13.9	2.8	-	228.0	25.7	15.9	.8	.1	1.8
OFFICE OF ECONOMIC OPPORTUNITY	123.4	6.7	10.4	-	20.0	-	85.9	.3	-	-
OFFICE OF EMERGENCY PREPAREDNESS	1.0	.6	.3	-	-	-	.1	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY	1.9	1.9	-	-	-	-	-	-	-	-
SMALL BUSINESS ADMINISTRATION	.1	*	-	-	.1	-	-	-	-	-
SMITHSONIAN INSTITUTION	18.2	16.6	-	-	1.1	-	-	-	.5	-
TENNESSEE VALLEY AUTHORITY	8.2	8.0	-	-	.1	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY	4.2	2.7	1.2	-	.1	-	.2	*	-	-
UNITED STATES INFORMATION AGENCY	.2	.1	.1	-	-	-	-	-	-	-
VETERANS ADMINISTRATION	58.6	57.3	.3	-	.5	-	.1	-	.5	-

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-8. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)

(MILLIONS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	
TOTAL, ALL AGENCIES	15,387.2	3,928.7	7,718.1	478.6	1,616.6	762.1	470.9	208.3	136.2	67.7
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL	302.8	226.5	.7	-	68.0	-	.9	-	*	6.6
AGRICULTURAL RESEARCH SERVICE	172.3	162.7	.6	-	2.6	-	.5	-	-	6.0
COOPERATIVE STATE RESEARCH SERVICE	67.0	2.3	-	-	64.4	-	.3	-	-	-
ECONOMIC RESEARCH SERVICE	15.7	15.5	-	-	.2	-	-	-	-	-
FARMER COOPERATIVE SERVICE	.9	.9	-	-	.1	-	-	-	-	-
FOREST SERVICE	45.9	44.5	*	-	.7	-	-	-	*	.6
NATIONAL AGRICULTURAL LIBRARY	.3	.1	*	-	*	-	.1	-	-	-
STATISTICAL REPORTING SERVICE	.7	.5	.1	-	.1	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL	157.9	110.7	31.9	-	6.3	-	1.4	-	5.9	1.6
BUREAU OF THE CENSUS	4.3	4.2	-	-	*	-	*	-	-	-
ECONOMIC DEVELOPMENT ADMINISTRATION	5.4	1.6	1.4	-	1.6	-	.3	-	.5	-
MARITIME ADMINISTRATION	24.3	.9	22.3	-	1.1	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS	31.7	30.6	*	-	.4	-	-	-	-	.6
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	85.0	66.3	8.2	-	3.1	-	1.1	-	5.4	.9
OFFICE OF BUSINESS ECONOMICS	4.0	4.0	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS	2.6	2.6	-	-	-	-	-	-	-	-
PATENT OFFICE	.6	.6	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL	7,420.2	1,983.3	4,826.6	8.8	195.1	145.9	88.0	155.0	9.5	8.1
DEPARTMENT OF THE ARMY	1,691.1	637.1	946.9	-	30.8	28.5	20.4	16.1	9.5	1.8
DEPARTMENT OF THE NAVY	2,236.9	728.8	1,349.7	-	69.8	71.4	12.7	-	-	4.4
DEPARTMENT OF THE AIR FORCE	3,024.6	486.6	2,300.0	-	57.1	25.7	42.8	111.2	-	1.1
DEFENSE AGENCIES	414.0	127.8	186.2	8.6	32.0	20.2	11.2	27.4	-	.7
DEPARTMENTWIDE FUNDS	53.6	2.9	43.8	.3	5.5	*	.9	.3	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	1,479.9	293.6	59.4	-	768.6	6.8	213.1	27.5	73.3	37.7
FOOD AND DRUG ADMINISTRATION	25.9	14.8	.1	-	7.8	-	1.2	-	-	2.0
HEALTH SERVICES & MENTAL HEALTH ADMIN.	227.7	55.4	12.9	-	85.7	-	39.2	-	18.6	15.9
NATIONAL INSTITUTES OF HEALTH	1,038.5	204.2	43.3	-	605.9	.1	144.0	.8	24.7	15.5
OFFICE OF CHILD DEVELOPMENT	5.5	.3	-	-	3.5	-	1.7	-	-	-
OFFICE OF EDUCATION	133.2	4.8	2.8	-	49.7	6.7	18.0	26.7	24.5	-
SOCIAL AND REHABILITATION SERVICE	35.6	1.1	-	-	15.7	-	9.1	-	5.5	4.2
SOCIAL SECURITY ADMINISTRATION	13.5	13.0	.3	-	.2	-	-	-	-	-
DEPARTMENT OF HOUSING & URBAN DEVELOP.	49.4	6.1	36.1	.3	1.2	-	4.0	-	1.7	-
DEPARTMENT OF THE INTERIOR, TOTAL	185.1	107.7	36.9	1.4	23.1	-	5.8	-	10.0	.2
BONNEVILLE POWER ADMINISTRATION	2.7	1.4	.9	-	.2	-	-	-	-	.2
BUREAU OF LAND MANAGEMENT	.8	.4	-	-	.3	-	-	-	*	-
BUREAU OF MINES	58.0	43.3	11.0	-	3.0	-	.6	-	.1	-
BUREAU OF OUTDOOR RECREATION	.1	.1	-	-	.1	-	-	-	-	-
BUREAU OF RECLAMATION	9.1	3.5	1.4	-	3.6	-	-	-	.5	-
BUREAU OF SPORT FISHERIES & WILDLIFE	22.2	12.8	-	-	.3	-	.2	-	8.9	-
GEOLOGICAL SURVEY	43.2	41.6	.6	-	.9	-	-	-	.1	-
OFFICE OF COAL RESEARCH	12.4	.2	5.6	-	2.5	-	4.1	-	-	-
OFFICE OF SALINE WATER	23.4	3.5	15.8	1.4	2.3	-	.4	-	-	-
OFFICE OF THE SECRETARY	.8	*	.6	-	.2	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH	12.4	.8	1.0	-	9.8	-	.6	-	.3	-

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TABLE C-8. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)

CONTINUED

(MILLIONS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY IN-DUSTRIAL FIRMS	UNIVER-SITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTI-TUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTI-TUTIONS	OTHER	
DEPARTMENT OF JUSTICE, TOTAL...........	10.1	1.0	2.8	-	1.9	-	.9	.2	3.3	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	1.6	*	.4	-	.4	-	.5	.2	-	-
BUREAU OF PRISONS......................	.2	.1	*	-	-	-	*	-	*	-
FEDERAL BUREAU OF INVESTIGATION........	.8	.1	.7	-	-	-	-	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	7.5	.8	1.7	-	1.5	-	.4	-	3.2	-
DEPARTMENT OF LABOR, TOTAL.............	24.5	10.9	1.7	-	4.4	-	5.1	-	2.4	-
BUREAU OF LABOR STATISTICS.............	3.8	3.8	-	-	-	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	.7	.7	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	17.4	3.8	1.7	-	4.4	-	5.1	-	2.4	-
WORKPLACE STANDARDS ADMINISTRATION.....	2.6	2.6	-	-	-	-	-	-	-	-
POSTAL SERVICE.........................	45.1	7.4	37.1	-	.1	-	.3	.3	-	-
DEPARTMENT OF STATE, TOTAL.............	40.5	5.8	.3	-	17.4	-	11.4	-	.2	5.3
DEPARTMENTAL FUNDS.....................	.4	.1	-	-	*	-	*	-	.2	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	40.0	5.7	.2	-	17.4	-	11.4	-	-	5.3
PEACE CORPS............................	.1	*	.1	-	-	-	*	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	436.7	83.3	310.0	-	10.5	-	7.3	4.3	21.4	*
FEDERAL AVIATION ADMINISTRATION........	79.0	44.9	29.5	-	.9	-	-	3.7	-	-
FEDERAL HIGHWAY ADMINISTRATION.........	32.3	4.9	3.7	-	.6	-	2.3	-	20.8	-
FEDERAL RAILROAD ADMINISTRATION........	19.7	2.5	15.4	-	1.1	-	.1	.6	-	*
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	16.7	3.1	8.0	-	3.0	-	2.4	-	.2	-
OFFICE OF THE SECRETARY................	249.1	6.0	242.7	-	.4	-	-	-	-	-
UNITED STATES COAST GUARD..............	25.6	15.7	8.9	-	.1	-	.9	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	14.3	6.2	1.9	-	4.2	-	1.5	-	.4	-
DEPARTMENT OF THE TREASURY, TOTAL......	.9	.9	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING.......	.9	.9	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ADVISORY COMM ON INTERGOVT RELATIONS...	.5	.5	-	-	-	-	-	-	-	-
ATOMIC ENERGY COMMISSION...............	1,306.6	15.7	271.6	464.2	94.9	431.9	7.9	19.2	.2	.9
CIVIL AERONAUTICS BOARD................	.3	.3	-	-	-	-	-	-	-	-
CIVIL SERVICE COMMISSION...............	.5	.5	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	116.2	37.8	43.9	-	17.9	1.5	8.2	.4	2.5	3.9
FEDERAL COMMUNICATIONS COMMISSION......	.6	.6	-	-	-	-	-	-	-	-
FEDERAL HOME LOAN BANK BOARD...........	.4	.4	-	-	-	-	-	-	-	-
FEDERAL TRADE COMMISSION...............	.5	.5	-	-	-	-	-	-	-	-
GENERAL SERVICES ADMINISTRATION........	.3	.1	-	-	*	-	*	-	.2	-
LIBRARY OF CONGRESS....................	2.5	2.5	-	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	3,247.7	908.0	2,042.0	2.9	125.0	144.7	23.2	.5	-	1.5
NATIONAL SCIENCE FOUNDATION............	345.0	23.5	3.5	1.0	257.8	31.4	20.7	.7	4.5	1.9
OFFICE OF ECONOMIC OPPORTUNITY.........	115.6	8.3	12.3	-	22.4	-	72.2	.3	-	-
OFFICE OF EMERGENCY PREPAREDNESS.......	1.0	.7	.3	-	-	-	.1	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	2.0	2.0	-	-	-	-	-	-	-	-
SMITHSONIAN INSTITUTION................	20.3	18.8	-	-	1.1	-	-	-	.4	-
TENNESSEE VALLEY AUTHORITY.............	9.3	9.2	-	-	.1	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	3.1	2.0	.5	-	.1	-	.4	-	.1	-
UNITED STATES INFORMATION AGENCY.......	.2	.1	.1	-	-	-	-	-	-	-
VETERANS ADMINISTRATION................	61.6	60.0	.4	-	.8	-	.1	-	.5	-

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(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-9. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

(MILLIONS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	
TOTAL, ALL AGENCIES	16,661.5	4,139.1	8,504.1	497.9	1,826.0	778.0	483.9	210.9	145.4	76.1
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL	314.0	227.4	.6	-	73.9	-	.9	-	*	11.2
AGRICULTURAL RESEARCH SERVICE	176.8	163.7	.5	-	2.1	-	.4	-	-	10.0
COOPERATIVE STATE RESEARCH SERVICE	73.6	2.4	-	-	70.8	-	.3	-	-	-
ECONOMIC RESEARCH SERVICE	15.4	15.2	-	-	.2	-	-	-	-	-
FARMER COOPERATIVE SERVICE	.9	.9	-	-	*	-	-	-	-	-
FOREST SERVICE	46.3	44.4	*	-	.7	-	-	-	*	1.2
NATIONAL AGRICULTURAL LIBRARY	.3	.1	-	-	-	-	.2	-	-	-
STATISTICAL REPORTING SERVICE	.7	.5	.1	-	.1	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL	181.7	130.6	35.0	-	6.9	-	1.7	-	6.2	1.2
BUREAU OF THE CENSUS	3.5	3.5	-	-	.1	-	*	-	-	-
ECONOMIC DEVELOPMENT ADMINISTRATION	5.1	1.6	1.2	-	1.6	-	.3	-	.5	-
MARITIME ADMINISTRATION	26.0	1.0	23.9	-	1.1	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS	[illegible]	33.3	.1	-	.5	-	-	-	-	.4
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	102.[illegible]	81.2	9.9	-	3.7	-	1.4	-	5.7	.9
OFFICE OF BUSINESS ECONOMICS	4.[illegible]	4.5	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS	5.0	5.0	-	-	-	-	-	-	-	-
PATENT OFFICE	.6	.6	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL	8,332.0	2,139.8	5,558.5	9.4	213.4	155.3	79.4	163.2	4.2	8.7
DEPARTMENT OF THE ARMY	2,071.4	741.2	1,227.9	-	32.2	26.4	18.2	20.3	4.2	1.1
DEPARTMENT OF THE NAVY	2,515.3	771.1	1,567.0	-	71.2	85.4	13.2	2.0	-	5.5
DEPARTMENT OF THE AIR FORCE	3,209.0	477.7	2,502.8	-	55.0	24.3	36.5	111.7	-	1.2
DEFENSE AGENCIES	482.6	146.8	217.1	9.2	49.6	19.3	10.8	28.9	-	.9
DEPARTMENTWIDE FUNDS	53.7	3.0	43.8	.2	5.4	*	.9	.4	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	1,635.4	311.0	101.7	-	833.5	7.9	240.1	27.4	73.9	39.8
FOOD AND DRUG ADMINISTRATION	33.9	20.2	.1	-	7.0	-	1.4	-	-	5.1
HEALTH SERVICES & MENTAL HEALTH ADMIN.	229.5	56.7	14.6	-	86.2	-	43.0	-	19.2	9.8
NATIONAL INSTITUTES OF HEALTH	1,168.5	214.3	84.5	-	670.4	.3	158.3	.8	25.8	14.1
OFFICE OF CHILD DEVELOPMENT	16.5	.7	-	-	8.5	-	7.3	-	-	-
OFFICE OF EDUCATION	138.4	5.3	2.4	-	47.6	7.6	23.4	26.6	25.4	-
SOCIAL AND REHABILITATION SERVICE	34.4	1.0	-	-	13.2	-	6.7	-	3.5	10.0
SOCIAL SECURITY ADMINISTRATION	14.3	12.8	.1	-	.6	-	-	-	-	.8
DEPARTMENT OF HOUSING & URBAN DEVELOP.	49.0	5.5	37.3	.3	1.9	-	3.1	-	.8	-
DEPARTMENT OF THE INTERIOR, TOTAL	204.3	114.6	46.4	1.4	27.3	-	3.6	-	10.5	.5
BONNEVILLE POWER ADMINISTRATION	3.1	1.4	1.5	-	.2	-	-	-	-	-
BUREAU OF LAND MANAGEMENT	.8	.5	-	-	.3	-	-	-	*	-
BUREAU OF MINES	66.8	47.1	14.0	-	5.0	-	.6	-	.1	-
BUREAU OF OUTDOOR RECREATION	.1	.1	-	-	-	-	-	-	-	-
BUREAU OF RECLAMATION	9.6	3.9	1.7	-	3.5	-	-	-	.5	-
BUREAU OF SPORT FISHERIES & WILDLIFE	23.2	13.3	-	-	.4	-	.2	-	9.4	-
GEOLOGICAL SURVEY	48.5	43.7	2.0	-	2.6	-	-	-	.2	-
OFFICE OF COAL RESEARCH	12.3	.2	8.3	-	1.9	-	1.9	-	-	-
OFFICE OF SALINE WATER	24.8	3.5	17.1	1.4	2.4	-	.4	-	-	-
OFFICE OF THE SECRETARY	1.6	.1	.3	-	.7	-	-	-	-	.5
OFFICE OF WATER RESOURCES RESEARCH	13.5	.9	1.5	-	10.3	-	.5	-	.3	-

CONTINUED ON NEXT PAGE

TABLE C-9.   FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

CONTINUED

(MILLIONS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY IN-INDUSTRIAL FIRMS	UNIVER-SITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTI-TUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTI-TUTIONS	OTHER	FOREIGN
DEPARTMENT OF JUSTICE, TOTAL..........	23.9	2.4	6.4	-	5.1	-	1.2	.1	8.7	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	2.2	.1	.5	-	.6	-	.9	.1	-	-
BUREAU OF PRISONS......................	.3	.2	*	-	-	-	*	-	*	-
FEDERAL BUREAU OF INVESTIGATION........	.5	.1	.3	-	-	-	-	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	21.0	2.0	5.5	-	4.5	-	.3	-	8.7	-
DEPARTMENT OF LABOR, TOTAL.............	24.9	11.0	1.8	-	4.4	-	5.1	-	2.5	-
BUREAU OF LABOR STATISTICS.............	3.8	3.8	-	-	-	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	.8	.8	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	17.7	3.9	1.8	-	4.4	-	5.1	-	2.5	-
WORKPLACE STANDARDS ADMINISTRATION.....	2.5	2.5	-	-	-	-	-	-	-	-
POSTAL SERVICE.........................	76.3	14.6	60.5	-	.1	-	.3	.3	-	.5
DEPARTMENT OF STATE, TOTAL.............	44.1	5.8	.3	-	21.2	-	11.6	-	.5	4.8
DEPARTMENTAL FUNDS.....................	.7	.1	-	-	*	-	*	-	.5	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	43.5	5.7	.3	-	21.2	-	11.5	-	-	4.8
DEPARTMENT OF TRANSPORTATION, TOTAL....	483.2	87.9	343.8	1.0	11.1	-	14.1	.7	24.6	-
FEDERAL AVIATION ADMINISTRATION........	81.5	38.5	42.7	-	.3	-	-	-	-	-
FEDERAL HIGHWAY ADMINISTRATION.........	37.8	5.8	4.4	-	.6	-	2.8	-	24.3	-
FEDERAL RAILROAD ADMINISTRATION........	18.3	2.8	13.8	1.0	-	-	-	.7	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	27.5	3.6	13.0	-	6.1	-	4.7	-	-	-
OFFICE OF THE SECRETARY................	266.0	11.8	252.6	-	1.0	-	.5	-	.1	-
UNITED STATES COAST GUARD..............	31.8	18.8	11.1	-	.2	-	1.7	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	20.4	6.6	6.1	-	3.0	-	4.4	-	.2	-
DEPARTMENT OF THE TREASURY, TOTAL......	.9	.9	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING.......	.9	.9	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ADVISORY COMM ON INTERGOVT RELATIONS...	.5	.5	-	-	-	-	-	-	-	-
ATOMIC ENERGY COMMISSION...............	1,251.4	14.3	224.4	479.1	85.9	424.5	6.1	15.8	.1	1.2
CIVIL AERONAUTICS BOARD................	.3	.3	-	-	-	-	-	-	-	-
CIVIL SERVICE COMMISSION...............	.5	.5	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	144.4	43.8	61.8	-	21.4	1.6	8.4	.2	2.5	4.6
FEDERAL COMMUNICATIONS COMMISSION......	.9	.7	.2	-	*	-	-	-	-	-
FEDERAL HOME LOAN BANK BOARD...........	.5	.5	-	-	-	-	-	-	-	-
FEDERAL TRADE COMMISSION...............	.5	.5	-	-	-	-	-	-	-	-
GENERAL SERVICES ADMINISTRATION........	.2	*	-	-	-	-	-	-	.2	-
LIBRARY OF CONGRESS....................	3.9	3.9	-	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	3,188.5	887.2	2,008.0	3.8	110.0	153.8	23.4	.8	-	1.5
NATIONAL SCIENCE FOUNDATION............	494.3	27.1	4.0	3.0	383.7	35.0	27.8	2.2	9.5	2.1
OFFICE OF ECONOMIC OPPORTUNITY.........	100.0	9.1	12.3	-	22.4	-	56.2	-	-	-
OFFICE OF EMERGENCY PREPAREDNESS.......	.5	.4	.1	-	-	-	.1	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	2.2	2.2	-	-	-	-	-	-	-	-
SMALL BUSINESS ADMINISTRATION..........	.2	*	-	-	.1	-	-	-	.1	-
SMITHSONIAN INSTITUTION................	27.2	24.0	-	-	2.6	-	-	-	.7	-
TENNESSEE VALLEY AUTHORITY.............	10.2	10.1	-	-	.1	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	3.5	2.2	.5	-	.1	-	.6	-	-	-
UNITED STATES INFORMATION AGENCY.......	.2	.1	.1	-	*	-	-	-	-	-
VETERANS ADMINISTRATION................	61.9	60.3	.4	-	.8	-	.1	-	.5	-

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-10. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	
TOTAL, ALL AGENCIES....................	5,601,906	2,032,793	1,294,117	72,893	1,351,567	417,190	268,321	45,055	88,201	31,769
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	271,925	200,092	578	-	64,677	-	1,072	-	12	5,494
AGRICULTURAL RESEARCH SERVICE..........	152,468	141,475	382	-	4,972	-	772	-	-	4,867
COOPERATIVE STATE RESEARCH SERVICE.....	61,052	2,080	-	-	58,672	-	300	-	-	-
ECONOMIC RESEARCH SERVICE..............	14,904	14,683	8	-	208	-	-	-	5	-
FARMER COOPERATIVE SERVICE.............	884	865	-	-	19	-	-	-	-	-
FOREST SERVICE.........................	41,933	40,556	6	-	737	-	-	-	7	627
NATIONAL AGRICULTURAL LIBRARY..........	208	107	93	-	8	-	-	-	-	-
STATISTICAL REPORTING SERVICE..........	476	326	89	-	61	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	94,114	76,177	6,355	-	3,175	-	879	3	6,243	1,282
BUREAU OF THE CENSUS...................	1,665	1,600	-	-	65	-	-	-	-	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	3,809	524	911	-	344	-	157	-	1,873	-
MARITIME ADMINISTRATION................	4,878	515	4,169	-	194	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	27,055	26,276	-	-	373	-	-	-	-	406
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	52,915	43,473	1,275	-	2,199	-	722	-	4,370	876
OFFICE OF BUSINESS ECONOMICS...........	3,505	3,505	-	-	-	-	-	-	-	-
PATENT OFFICE..........................	287	284	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	1,556,783	582,221	684,204	3,853	180,456	38,812	34,187	27,803	469	4,778
DEPARTMENT OF THE ARMY.................	291,536	212,823	41,569	-	24,534	2,951	4,120	3,795	469	1,275
DEPARTMENT OF THE NAVY.................	272,922	156,955	41,326	-	53,491	14,434	6,409	44	-	263
DEPARTMENT OF THE AIR FORCE............	665,000	131,783	452,464	-	65,956	225	13,503	-	-	1,069
DEFENSE AGENCIES.......................	323,234	80,091	147,442	3,734	36,095	21,182	9,091	23,428	-	2,171
DEPARTMENTWIDE FUNDS...................	4,091	569	1,403	119	380	20	1,064	536	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	1,129,271	235,708	38,852	-	621,934	4,933	163,272	2,570	46,886	15,116
FOOD AND DRUG ADMINISTRATION...........	21,805	13,350	175	-	4,633	-	1,007	-	2,164	476
HEALTH SERVICES & MENTAL HEALTH ADMIN..	160,358	43,117	3,739	-	70,825	-	22,986	-	16,770	2,921
NATIONAL INSTITUTES OF HEALTH..........	868,788	164,895	34,082	-	516,241	-	121,207	640	21,958	9,765
OFFICE OF CHILD DEVELOPMENT............	1,000	50	-	-	950	-	-	-	-	-
OFFICE OF EDUCATION....................	33,066	1,251	720	-	13,461	4,933	9,343	1,930	1,415	13
SOCIAL AND REHABILITATION SERVICE......	31,885	998	-	-	15,673	-	8,694	-	4,579	1,941
SOCIAL SECURITY ADMINISTRATION.........	12,369	12,047	136	-	151	-	35	-	-	-
DEPARTMENT OF HOUSING & URBAN DEVELOP..	7,097	50	5,628	-	-	-	1,064	-	355	-
DEPARTMENT OF THE INTERIOR, TOTAL......	121,692	85,720	7,457	375	17,938	-	1,472	97	8,633	-
BONNEVILLE POWER ADMINISTRATION........	524	134	305	-	85	-	-	-	-	-
BUREAU OF LAND MANAGEMENT..............	710	350	-	-	333	-	-	-	27	-
BUREAU OF MINES........................	33,894	31,940	-	-	1,563	-	172	97	122	-
BUREAU OF OUTDOOR RECREATION...........	92	92	-	-	-	-	-	-	-	-
BUREAU OF RECLAMATION..................	7,202	2,727	944	-	3,273	-	-	-	258	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	18,041	9,292	-	-	473	-	198	-	8,078	-
GEOLOGICAL SURVEY......................	40,963	40,001	368	-	594	-	-	-	-	-
OFFICE OF COAL RESEARCH................	2,341	300	1,291	-	300	-	450	-	-	-
OFFICE OF SALINE WATER.................	7,175	234	3,946	375	2,164	-	456	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	10,750	650	603	-	9,153	-	196	-	148	-
DEPARTMENT OF JUSTICE, TOTAL...........	5,334	301	825	-	1,842	-	331	-	2,035	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	839	25	-	-	483	-	331	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	4,495	276	825	-	1,359	-	-	-	2,035	-
DEPARTMENT OF LABOR, TOTAL.............	11,286	6,439	621	-	1,554	-	1,803	-	869	-
BUREAU OF LABOR STATISTICS.............	2,566	2,566	-	-	-	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	290	290	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	6,214	1,367	621	-	1,554	-	1,803	-	869	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,216	2,216	-	-	-	-	-	-	-	-

TABLE C-10. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY IN-DUSTRIAL FIRMS	UNIVER-SITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTI-TUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTI-TUTIONS	OTHER	FOREIGN
POSTAL SERVICE	4,577	1,634	2,117	-	29	-	3	794	-	-
DEPARTMENT OF STATE, TOTAL	18,895	4,771	50	-	5,258	-	8,078	-	49	689
DEPARTMENTAL FUNDS	125	52	-	-	26	-	3	-	44	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	18,627	4,648	-	-	5,232	-	8,058	-	-	689
PEACE CORPS	143	71	50	-	-	-	17	-	5	-
DEPARTMENT OF TRANSPORTATION, TOTAL	88,263	31,843	16,791	-	10,636	-	9,658	222	19,113	-
FEDERAL AVIATION ADMINISTRATION	9,960	9,227	14	-	719	-	-	-	-	-
FEDERAL HIGHWAY ADMINISTRATION	28,608	4,863	3,858	-	650	-	2,294	-	16,943	-
FEDERAL RAILROAD ADMINISTRATION	4,743	850	3,409	-	235	-	85	164	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN	15,892	1,370	3,639	-	4,986	-	3,961	-	1,936	-
OFFICE OF THE SECRETARY	8,956	2,260	5,230	-	852	-	422	58	134	-
UNITED STATES COAST GUARD	13,881	13,264	411	-	106	-	100	-	-	-
URBAN MASS TRANSPORTATION ADMIN	6,223	9	230	-	3,088	-	2,796	-	100	-
DEPARTMENT OF THE TREASURY, TOTAL	286	286	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING	286	286	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ADVISORY COMM ON INTERGOVT RELATIONS	553	553	-	-	-	-	-	-	-	-
ATOMIC ENERGY COMMISSION	433,117	4,774	3,550	66,633	96,584	244,689	4,848	11,308	93	638
CIVIL AERONAUTICS BOARD	263	263	-	-	-	-	-	-	-	-
CIVIL SERVICE COMMISSION	279	279	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY	52,984	18,736	10,233	-	14,918	219	5,585	197	2,422	674
FEDERAL COMMUNICATIONS COMMISSION	1,015	615	400	-	-	-	-	-	-	-
FEDERAL HOME LOAN BANK BOARD	390	291	-	-	99	-	-	-	-	-
FEDERAL TRADE COMMISSION	388	388	-	-	-	-	-	-	-	-
GENERAL SERVICES ADMINISTRATION	215	198	-	-	-	-	17	-	-	-
LIBRARY OF CONGRESS	968	925	43	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	1,409,732	679,657	503,645	2,032	96,718	102,869	22,603	874	-	1,334
NATIONAL SCIENCE FOUNDATION	274,789	12,700	2,805	-	223,249	25,668	7,707	847	49	1,764
OFFICE OF ECONOMIC OPPORTUNITY	29,400	4,498	8,359	-	10,764	-	5,467	312	-	-
OFFICE OF EMERGENCY PREPAREDNESS	1,016	620	321	-	-	-	75	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY	929	929	-	-	-	-	-	-	-	-
SMALL BUSINESS ADMINISTRATION	101	10	-	-	91	-	-	-	-	-
SMITHSONIAN INSTITUTION	18,217	16,634	-	-	1,080	-	-	-	503	-
TENNESSEE VALLEY AUTHORITY	6,376	6,254	-	-	122	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY	3,732	2,233	1,171	-	100	-	200	28	-	-
UNITED STATES INFORMATION AGENCY	157	100	57	-	-	-	-	-	-	-
VETERANS ADMINISTRATION	57,762	56,894	55	-	343	-	-	-	470	-

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-11. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	
TOTAL, ALL AGENCIES....................	5,995,123	2,101,994	1,405,022	72,079	1,470,727	428,006	302,633	45,851	113,511	55,300
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	292,610	216,853	332	-	67,958	-	856	-	10	6,601
AGRICULTURAL RESEARCH SERVICE..........	163,281	154,158	202	-	2,516	-	429	-	-	5,976
COOPERATIVE STATE RESEARCH SERVICE.....	66,999	2,292	-	-	64,380	-	327	-	-	-
ECONOMIC RESEARCH SERVICE..............	15,688	15,488	-	-	200	-	-	-	-	-
FARMER COOPERATIVE SERVICE.............	945	870	-	-	75	-	-	-	-	-
FOREST SERVICE.........................	44,950	43,625	5	-	685	-	-	-	10	625
NATIONAL AGRICULTURAL LIBRARY..........	259	102	30	-	27	-	100	-	-	-
STATISTICAL REPORTING SERVICE..........	488	318	95	-	75	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	128,050	97,873	18,627	-	4,201	-	1,074	-	4,980	1,295
BUREAU OF THE CENSUS...................	2,165	2,103	-	-	32	-	30	-	-	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	1,844	664	659	-	446	-	75	-	-	-
MARITIME ADMINISTRATION................	17,493	888	16,236	-	369	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	28,902	28,088	33	-	416	-	-	-	-	365
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	70,545	59,029	1,699	-	2,938	-	969	-	4,980	930
OFFICE OF BUSINESS ECONOMICS...........	4,004	4,004	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS...........	2,642	2,642	-	-	-	-	-	-	-	-
PATENT OFFICE..........................	455	455	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	1,479,333	557,896	650,401	2,612	167,220	32,811	36,794	28,579	30	2,990
DEPARTMENT OF THE ARMY.................	256,258	184,712	34,341	-	25,597	115	7,340	2,936	30	1,187
DEPARTMENT OF THE NAVY.................	268,000	154,231	38,166	-	56,183	12,587	6,694	-	-	139
DEPARTMENT OF THE AIR FORCE............	644,000	136,966	438,356	-	54,576	185	12,999	-	-	918
DEFENSE AGENCIES.......................	307,523	81,569	138,286	2,352	30,409	19,884	8,899	25,378	-	746
DEPARTMENTWIDE FUNDS...................	3,552	418	1,252	260	455	40	862	265	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	1,362,222	281,632	49,019	-	722,507	4,721	195,219	3,050	69,278	36,796
FOOD AND DRUG ADMINISTRATION...........	25,922	14,824	120	-	7,800	-	1,151	-	-	2,027
HEALTH SERVICES & MENTAL HEALTH ADMIN..	189,286	47,403	5,902	-	69,189	-	32,437	-	18,579	15,776
NATIONAL INSTITUTES OF HEALTH..........	1,030,707	203,549	41,304	-	601,462	-	143,407	771	24,686	15,528
OFFICE OF CHILD DEVELOPMENT............	2,000	100	-	-	1,900	-	-	-	-	-
OFFICE OF EDUCATION....................	68,600	1,785	1,350	-	27,108	4,721	10,033	2,279	21,324	-
SOCIAL AND REHABILITATION SERVICE......	32,200	1,017	-	-	14,838	-	8,191	-	4,689	3,465
SOCIAL SECURITY ADMINISTRATION.........	13,507	12,954	343	-	210	-	-	-	-	-
DEPARTMENT OF HOUSING & URBAN DEVELOP..	11,862	50	9,440	-	-	-	1,779	-	593	-
DEPARTMENT OF THE INTERIOR, TOTAL......	134,561	91,865	7,423	400	21,617	-	3,210	-	10,046	-
BONNEVILLE POWER ADMINISTRATION........	474	137	210	-	127	-	-	-	-	-
BUREAU OF LAND MANAGEMENT..............	755	407	-	-	308	-	-	-	40	-
BUREAU OF MINES........................	38,056	34,356	-	-	3,000	-	600	-	100	-
BUREAU OF OUTDOOR RECREATION...........	133	83	-	-	50	-	-	-	-	-
BUREAU OF RECLAMATION..................	9,018	3,408	1,417	-	3,645	-	-	-	548	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	20,132	10,727	-	-	315	-	155	-	8,935	-
GEOLOGICAL SURVEY......................	43,196	41,599	564	-	913	-	-	-	120	-
OFFICE OF COAL RESEARCH................	4,809	100	1,959	-	1,250	-	1,500	-	-	-
OFFICE OF SALINE WATER.................	5,000	210	1,900	400	2,090	-	400	-	-	-
OFFICE OF THE SECRETARY................	583	33	400	-	150	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	12,405	805	973	-	9,769	-	555	-	303	-
DEPARTMENT OF JUSTICE, TOTAL...........	6,210	327	1,266	-	1,819	-	521	157	2,120	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	1,560	39	421	-	422	-	521	157	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	4,650	288	845	-	1,397	-	-	-	2,120	-

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TABLE C-11. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	
DEPARTMENT OF LABOR, TOTAL.............	12,495	7,339	661	-	1,652	-	1,917	-	926	-
BUREAU OF LABOR STATISTICS.............	2,615	2,615	-	-	-	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	720	720	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	6,610	1,454	661	-	1,652	-	1,917	-	926	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,550	2,550	-	-	-	-	-	-	-	-
POSTAL SERVICE.........................	5,568	1,670	3,225	-	50	-	308	315	-	-
DEPARTMENT OF STATE, TOTAL.............	25,359	4,653	60	-	12,223	-	5,741	-	163	2,519
DEPARTMENTAL FUNDS.....................	350	109	-	-	35	-	43	-	163	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	24,906	4,513	-	-	12,188	-	5,686	-	-	2,519
PEACE CORPS............................	103	31	60	-	-	-	12	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	110,895	45,143	32,769	-	9,336	-	5,736	372	17,491	48
FEDERAL AVIATION ADMINISTRATION........	23,018	18,900	3,385	-	733	-	-	-	-	-
FEDERAL HIGHWAY ADMINISTRATION.........	27,468	3,829	3,716	-	598	-	2,300	-	17,025	-
FEDERAL RAILROAD ADMINISTRATION........	9,846	1,860	6,902	-	516	-	148	372	-	48
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	13,072	3,052	4,395	-	3,040	-	2,350	-	235	-
OFFICE OF THE SECRETARY................	15,594	2,240	12,938	-	416	-	-	-	-	-
UNITED STATES COAST GUARD..............	15,931	14,510	866	-	147	-	408	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	5,966	752	567	-	3,886	-	530	-	231	-
DEPARTMENT OF THE TREASURY, TOTAL......	373	373	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING.......	373	373	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ADVISORY COMM ON INTERGOVT RELATIONS...	477	477	-	-	-	-	-	-	-	-
ATOMIC ENERGY COMMISSION...............	423,415	4,705	2,923	66,617	91,032	241,300	4,364	11,793	50	631
CIVIL AERONAUTICS BOARD................	270	270	-	-	-	-	-	-	-	-
CIVIL SERVICE COMMISSION...............	327	327	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	61,482	19,699	16,525	-	15,092	230	5,976	211	2,469	1,280
FEDERAL COMMUNICATIONS COMMISSION......	638	638	-	-	-	-	-	-	-	-
FEDERAL HOME LOAN BANK BOARD...........	388	388	-	-	-	-	-	-	-	-
FEDERAL TRADE COMMISSION...............	467	467	-	-	-	-	-	-	-	-
GENERAL SERVICES ADMINISTRATION........	83	65	-	-	-	-	18	-	-	-
LIBRARY OF CONGRESS....................	1,006	1,006	-	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	1,477,583	652,793	597,251	1,450	88,513	117,566	18,340	417	-	1,253
NATIONAL SCIENCE FOUNDATION............	327,286	20,522	3,506	1,000	250,874	31,378	13,085	657	4,377	1,887
OFFICE OF ECONOMIC OPPORTUNITY.........	39,150	6,014	10,819	-	14,797	-	7,220	300	-	-
OFFICE OF EMERGENCY PREPAREDNESS.......	995	670	250	-	-	-	75	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	990	990	-	-	-	-	-	-	-	-
SMITHSONIAN INSTITUTION................	20,346	18,842	-	-	1,064	-	-	-	440	-
TENNESSEE VALLEY AUTHORITY.............	7,478	7,335	-	-	143	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	2,335	1,335	400	-	120	-	400	-	80	-
UNITED STATES INFORMATION AGENCY.......	160	100	60	-	-	-	-	-	-	-
VETERANS ADMINISTRATION................	60,709	59,677	65	-	509	-	-	-	458	-

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-12. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	FOREIGN
TOTAL, ALL AGENCIES....................	6,643,584	2,223,337	1,674,321	75,176	1,668,530	435,723	330,753	50,047	123,888	61,809
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	303,470	217,301	297	-	73,802	-	860	-	10	11,200
AGRICULTURAL RESEARCH SERVICE..........	167,378	154,794	197	-	2,018	-	369	-	-	10,000
COOPERATIVE STATE RESEARCH SERVICE.....	73,602	2,447	-	-	70,814	-	341	-	-	-
ECONOMIC RESEARCH SERVICE..............	15,428	15,228	-	-	200	-	-	-	-	-
FARMER COOPERATIVE SERVICE.............	943	933	-	-	10	-	-	-	-	-
FOREST SERVICE.........................	45,368	43,468	5	-	685	-	-	-	10	1,200
NATIONAL AGRICULTURAL LIBRARY..........	263	113	-	-	-	-	150	-	-	-
STATISTICAL REPORTING SERVICE..........	488	318	95	-	75	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	143,772	115,554	15,072	-	5,539	-	1,306	-	5,225	1,076
BUREAU OF THE CENSUS...................	1,904	1,819	-	-	55	-	30	-	-	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	1,591	666	435	-	390	-	100	-	-	-
MARITIME ADMINISTRATION................	14,445	845	12,530	-	1,070	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	30,480	29,767	50	-	461	-	-	-	-	202
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	85,374	72,479	2,057	-	3,563	-	1,176	-	5,225	874
OFFICE OF BUSINESS ECONOMICS...........	4,508	4,508	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS...........	5,000	5,000	-	-	-	-	-	-	-	-
PATENT OFFICE..........................	470	470	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	1,633,562	601,302	737,325	3,195	187,054	34,347	34,653	32,244	520	2,922
DEPARTMENT OF THE ARMY.................	280,428	207,995	33,091	-	27,594	850	5,330	3,980	520	1,068
DEPARTMENT OF THE NAVY.................	292,000	163,960	47,886	-	58,097	14,127	7,051	770	-	109
DEPARTMENT OF THE AIR FORCE............	698,000	146,394	485,095	-	52,699	250	12,712	-	-	850
DEFENSE AGENCIES.......................	359,434	82,453	169,984	3,040	48,220	19,080	8,650	27,112	-	895
DEPARTMENTWIDE FUNDS...................	3,700	500	1,269	155	444	40	910	382	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	1,489,758	298,136	90,516	-	775,486	4,000	212,069	3,037	67,541	38,973
FOOD AND DRUG ADMINISTRATION...........	33,916	20,249	144	-	7,000	-	1,381	-	-	5,142
HEALTH SERVICES & MENTAL HEALTH ADMIN..	188,491	48,621	5,988	-	71,598	-	33,371	-	19,210	9,703
NATIONAL INSTITUTES OF HEALTH..........	1,154,422	213,421	83,081	-	660,043	-	157,204	837	25,758	14,078
OFFICE OF CHILD DEVELOPMENT............	3,500	140	-	-	3,360	-	-	-	-	-
OFFICE OF EDUCATION....................	63,213	1,890	1,200	-	20,286	4,000	14,117	2,200	19,520	-
SOCIAL AND REHABILITATION SERVICE......	31,930	982	-	-	12,599	-	5,996	-	3,053	9,300
SOCIAL SECURITY ADMINISTRATION.........	14,286	12,833	103	-	600	-	-	-	-	750
DEPARTMENT OF HOUSING & URBAN DEVELOP..	12,740	50	10,142	-	127	-	1,911	-	510	-
DEPARTMENT OF THE INTERIOR, TOTAL......	144,366	94,461	9,791	350	26,300	-	2,555	-	10,534	375
BONNEVILLE POWER ADMINISTRATION........	495	98	253	-	144	-	-	-	-	-
BUREAU OF LAND MANAGEMENT..............	793	448	-	-	305	-	-	-	40	-
BUREAU OF MINES........................	39,541	33,841	-	-	5,000	-	600	-	100	-
BUREAU OF OUTDOOR RECREATION...........	76	76	-	-	-	-	-	-	-	-
BUREAU OF RECLAMATION..................	9,523	3,816	1,681	-	3,507	-	-	-	519	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	21,158	11,203	-	-	400	-	155	-	9,400	-
GEOLOGICAL SURVEY......................	48,530	43,678	2,033	-	2,644	-	-	-	175	-
OFFICE OF COAL RESEARCH................	4,059	100	1,809	-	1,250	-	900	-	-	-
OFFICE OF SALINE WATER.................	5,475	210	2,325	350	2,190	-	400	-	-	-
OFFICE OF THE SECRETARY................	1,193	68	190	-	560	-	-	-	-	375
OFFICE OF WATER RESOURCES RESEARCH.....	13,523	923	1,500	-	10,300	-	500	-	300	-
DEPARTMENT OF JUSTICE, TOTAL...........	15,162	1,005	3,832	-	3,573	-	890	127	5,735	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	2,162	63	509	-	573	-	890	127	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	13,000	942	3,323	-	3,000	-	-	-	5,735	-

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TABLE C-12. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	
DEPARTMENT OF LABOR, TOTAL............	12,642	7,432	668	-	1,670	-	1,937	-	935	-
BUREAU OF LABOR STATISTICS............	2,617	2,617	-	-	-	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	812	812	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	6,680	1,470	668	-	1,670	-	1,937	-	935	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,533	2,533	-	-	-	-	-	-	-	-
POSTAL SERVICE........................	5,860	2,506	2,639	-	100	-	300	315	-	-
DEPARTMENT OF STATE, TOTAL............	28,204	4,749	-	-	14,576	-	6,166	-	463	2,250
DEPARTMENTAL FUNDS....................	650	109	-	-	35	-	43	-	463	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	27,554	4,640	-	-	14,541	-	6,123	-	-	2,250
DEPARTMENT OF TRANSPORTATION, TOTAL....	183,949	58,756	82,651	366	11,146	-	10,500	300	20,230	-
FEDERAL AVIATION ADMINISTRATION........	60,371	22,871	37,220	-	280	-	-	-	-	-
FEDERAL HIGHWAY ADMINISTRATION.........	32,148	4,482	4,350	-	586	-	2,800	-	19,930	-
FEDERAL RAILROAD ADMINISTRATION........	10,500	1,933	7,901	366	-	-	-	300	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	22,950	3,605	8,545	-	6,100	-	4,700	-	-	-
OFFICE OF THE SECRETARY................	31,000	8,000	21,400	-	1,000	-	500	-	100	-
UNITED STATES COAST GUARD..............	20,568	17,263	2,325	-	180	-	800	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	6,412	602	910	-	3,000	-	1,700	-	200	-
DEPARTMENT OF THE TREASURY, TOTAL......	390	390	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING.......	390	390	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ADVISORY COMM ON INTERGOVT RELATIONS...	487	487	-	-	-	-	-	-	-	-
ATOMIC ENERGY COMMISSION...............	411,384	4,670	3,062	65,605	82,884	238,280	4,326	11,880	50	627
CIVIL AERONAUTICS BOARD................	331	331	-	-	-	-	-	-	-	-
CIVIL SERVICE COMMISSION...............	350	350	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	78,730	27,904	23,010	-	18,233	183	5,773	164	2,427	1,036
FEDERAL COMMUNICATIONS COMMISSION......	869	669	160	-	40	-	-	-	-	-
FEDERAL HOME LOAN BANK BOARD...........	497	497	-	-	-	-	-	-	-	-
FEDERAL TRADE COMMISSION...............	460	460	-	-	-	-	-	-	-	-
GENERAL SERVICES ADMINISTRATION........	20	20	-	-	-	-	-	-	-	-
LIBRARY OF CONGRESS....................	1,175	1,175	-	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	1,561,917	661,740	679,401	2,660	71,462	123,959	20,661	780	-	1,254
NATIONAL SCIENCE FOUNDATION............	470,036	21,061	4,000	3,000	376,454	34,954	18,796	1,200	8,475	2,096
OFFICE OF ECONOMIC OPPORTUNITY.........	42,600	7,394	11,130	-	16,656	-	7,420	-	-	-
OFFICE OF EMERGENCY PREPAREDNESS.......	535	375	85	-	-	-	75	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	1,080	1,080	-	-	-	-	-	-	-	-
SMALL BUSINESS ADMINISTRATION..........	205	10	-	-	90	-	-	-	105	-
SMITHSONIAN INSTITUTION................	27,247	23,985	-	-	2,592	-	-	-	670	-
TENNESSEE VALLEY AUTHORITY.............	8,197	8,100	-	-	97	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	2,420	1,300	425	-	140	-	555	-	-	-
UNITED STATES INFORMATION AGENCY.......	150	100	50	-	-	-	-	-	-	-
VETERANS ADMINISTRATION................	61,019	59,987	65	-	509	-	-	-	458	-

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-13. FEDERAL OBLIGATIONS FOR RESEARCH, BY DETAILED FIELD OF SCIENCE, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

FIELD OF SCIENCE	ACTUAL, 1970	ESTIMATES	
		1971	1972
TOTAL, ALL FIELDS	5,601,906	5,995,123	6,643,584
LIFE SCIENCES, TOTAL	1,533,432	1,735,136	1,945,097
BIOLOGICAL	684,782	735,295	850,875
CLINICAL MEDICAL	685,633	804,177	874,284
OTHER MEDICAL SCIENCES	144,900	168,361	193,169
LIFE SCIENCES, NEC	18,117	27,303	26,769
PSYCHOLOGY, TOTAL	113,328	125,166	140,413
BIOLOGICAL ASPECTS	45,141	47,379	58,390
SOCIAL ASPECTS	64,175	74,569	79,054
PSYCHOLOGICAL SCIENCES, NEC	4,012	3,218	2,969
PHYSICAL SCIENCES, TOTAL	1,010,450	1,025,477	1,086,483
ASTRONOMY	210,950	222,196	198,772
CHEMISTRY	243,894	246,627	304,348
PHYSICS	538,333	536,306	568,421
PHYSICAL SCIENCES, NEC	17,273	20,348	14,942
ENVIRONMENTAL SCIENCES, TOTAL	586,631	632,124	701,988
ATMOSPHERIC SCIENCES	287,737	311,193	340,301
GEOLOGICAL SCIENCES	188,897	193,223	216,329
OCEANOGRAPHY (EXCLUDING BIOLOGICAL)	91,222	97,290	112,148
ENVIRONMENTAL SCIENCE, NEC	18,775	30,418	33,210
MATHEMATICS	102,138	103,963	111,770
ENGINEERING, TOTAL	1,967,739	2,013,906	2,197,655
AERONAUTICAL	466,464	473,635	474,598
ASTRONAUTICAL	289,525	287,850	328,946
CHEMICAL	117,224	113,299	122,850
CIVIL	60,771	80,425	106,178
ELECTRICAL	354,351	356,340	393,633
MECHANICAL	140,011	145,327	143,849
METALLURGY & MATERIALS	151,549	154,734	159,750
ENGINEERING, NEC	387,844	402,296	467,851
SOCIAL SCIENCES, TOTAL	215,852	272,994	311,018
ANTHROPOLOGY	8,763	10,412	15,128
ECONOMICS	84,332	89,344	98,706
HISTORY	4,542	5,006	5,181
LINGUISTICS	1,989	2,012	2,636
POLITICAL SCIENCE	7,417	6,070	7,327
SOCIOLOGY	38,487	50,009	71,840
SOCIAL SCIENCES, NEC	70,322	110,141	110,200
OTHER SCIENCES, NEC	72,336	86,357	149,160

TABLE C-14. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOL-OGY	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATHE-MATICS	ENGI-NEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
TOTAL, ALL AGENCIES....................	5,601,906	1,533,432	113,328	1,010,450	586,631	102,138	1,967,739	215,852	72,336
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	271,925	166,681	32	36,908	4,838	686	28,909	33,663	208
AGRICULTURAL RESEARCH SERVICE..........	152,468	98,631	32	30,757	859	332	20,707	1,150	-
COOPERATIVE STATE RESEARCH SERVICE.....	61,052	41,983	-	3,053	350	-	2,092	13,574	-
ECONOMIC RESEARCH SERVICE..............	14,904	-	-	-	-	-	-	14,904	-
FARMER COOPERATIVE SERVICE.............	884	-	-	-	-	-	-	884	-
FOREST SERVICE.........................	41,933	26,067	-	3,098	3,629	145	6,110	2,884	-
NATIONAL AGRICULTURAL LIBRARY..........	208	-	-	-	-	-	-	-	208
STATISTICAL REPORTING SERVICE..........	476	-	-	-	-	209	-	267	-
DEPARTMENT OF COMMERCE, TOTAL..........	94,114	24,157	1,096	17,156	22,090	1,347	15,689	10,826	1,753
BUREAU OF THE CENSUS...................	1,665	-	567	-	-	266	-	832	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	3,809	-	-	-	-	-	-	3,809	-
MARITIME ADMINISTRATION................	4,878	-	-	-	-	89	3,268	1,521	-
NATIONAL BUREAU OF STANDARDS...........	27,055	-	-	15,779	-	992	9,456	-	828
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	52,915	24,157	529	1,377	22,090	-	2,965	1,159	638
OFFICE OF BUSINESS ECONOMICS...........	3,505	-	-	-	-	-	-	3,505	-
PATENT OFFICE..........................	287	-	-	-	-	-	-	-	287
DEPARTMENT OF DEFENSE, TOTAL...........	1,556,783	104,003	25,594	219,639	128,253	61,899	972,775	4,693	39,927
DEPARTMENT OF THE ARMY.................	291,536	52,863	6,942	64,021	13,941	5,620	129,057	2,767	16,325
DEPARTMENT OF THE NAVY.................	272,922	15,595	6,257	62,509	46,895	29,026	112,640	-	-
DEPARTMENT OF THE AIR FORCE............	665,000	26,707	6,384	31,536	25,800	6,108	568,265	200	-
DEFENSE AGENCIES.......................	323,234	8,218	5,728	60,892	41,617	20,715	161,760	1,400	22,904
DEPARTMENTWIDE FUNDS...................	4,091	620	283	681	-	430	1,053	326	698
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	1,129,271	897,108	60,484	41,283	630	8,170	22,667	84,368	14,561
FOOD AND DRUG ADMINISTRATION...........	21,805	15,492	-	6,313	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	160,358	99,050	33,971	734	-	349	87	25,526	641
NATIONAL INSTITUTES OF HEALTH..........	868,788	770,946	17,715	34,236	630	7,821	22,435	1,085	13,920
OFFICE OF CHILD DEVELOPMENT............	1,000	500	-	-	-	-	-	500	-
OFFICE OF EDUCATION....................	33,066	-	6,825	-	-	-	-	26,241	-
SOCIAL AND REHABILITATION SERVICE......	31,885	11,120	1,973	-	-	-	145	18,647	-
SOCIAL SECURITY ADMINISTRATION.........	12,369	-	-	-	-	-	-	12,369	-
DEPARTMENT OF HOUSING & URBAN DEVELOP..	7,097	-	-	-	-	-	7,097	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	121,692	20,716	58	13,952	43,570	1,816	39,892	1,494	194
BONNEVILLE POWER ADMINISTRATION........	524	-	-	25	31	20	448	-	-
BUREAU OF LAND MANAGEMENT..............	710	650	-	-	-	-	-	60	-
BUREAU OF MINES........................	33,894	-	-	7,462	1,821	571	24,040	-	-
BUREAU OF OUTDOOR RECREATION...........	92	-	-	-	-	-	-	92	-
BUREAU OF RECLAMATION..................	7,202	25	-	-	4,810	-	2,294	73	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	18,041	18,041	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	40,963	-	-	3,891	34,748	950	1,374	-	-
OFFICE OF COAL RESEARCH................	2,341	-	-	-	-	-	2,341	-	-
OFFICE OF SALINE WATER.................	7,175	-	-	2,174	-	-	5,001	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	10,750	2,000	58	400	2,160	275	4,394	1,269	194
DEPARTMENT OF JUSTICE, TOTAL...........	5,334	326	1,239	630	-	240	363	2,536	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	839	326	114	-	-	-	-	399	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	4,495	-	1,125	630	-	240	363	2,137	-
DEPARTMENT OF LABOR, TOTAL.............	11,286	-	-	-	-	-	-	11,286	-
BUREAU OF LABOR STATISTICS.............	2,566	-	-	-	-	-	-	2,566	-
LABOR-MANAGEMENT SERVICES ADMIN........	290	-	-	-	-	-	-	290	-
MANPOWER ADMINISTRATION................	6,214	-	-	-	-	-	-	6,214	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,216	-	-	-	-	-	-	2,216	-

CONTINUED ON NEXT PAGE

TABLE C-14. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1970

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOL-OGY	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATHE-MATICS	ENGI-NEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
POSTAL SERVICE........................	4,577	-	-	-	-	-	-	-	4,577
DEPARTMENT OF STATE, TOTAL............	18,895	14,421	143	-	-	-	1,392	2,939	-
DEPARTMENTAL FUNDS....................	125	-	-	-	-	-	-	125	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	18,627	14,421	-	-	-	-	1,392	2,814	-
PEACE CORPS...........................	143	-	143	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	88,263	3,145	3,701	32	15,379	2,419	51,313	11,549	725
FEDERAL AVIATION ADMINISTRATION........	9,960	1,484	395	-	400	350	7,331	-	-
FEDERAL HIGHWAY ADMINISTRATION.........	28,608	-	-	-	-	-	27,177	1,431	-
FEDERAL RAILROAD ADMINISTRATION........	4,743	-	-	-	-	400	4,020	323	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	15,892	1,651	3,286	-	-	1,554	8,293	1,108	-
OFFICE OF THE SECRETARY................	8,956	-	-	-	249	-	1,902	6,805	-
UNITED STATES COAST GUARD..............	13,881	10	-	32	13,244	-	595	-	-
URBAN MASS TRANSPORTATION ADMIN........	6,223	-	20	-	1,486	115	1,995	1,882	725
DEPARTMENT OF THE TREASURY, TOTAL......	286	-	-	270	-	-	16	-	-
BUREAU OF ENGRAVING AND PRINTING.......	286	-	-	270	-	-	16	-	-
OTHER AGENCIES									
ADVISORY COMM ON INTERGOVT RELATIONS...	553	-	-	-	-	-	-	553	-
ATOMIC ENERGY COMMISSION...............	433,117	80,719	-	300,278	9,462	5,779	36,879	-	-
CIVIL AERONAUTICS BOARD................	263	-	-	-	-	-	-	263	-
CIVIL SERVICE COMMISSION...............	279	-	279	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	52,984	19,311	8	8,430	4,801	193	19,718	523	-
FEDERAL COMMUNICATIONS COMMISSION......	1,015	-	-	-	-	-	1,015	-	-
FEDERAL HOME LOAN BANK BOARD...........	390	-	-	-	-	-	-	390	-
FEDERAL TRADE COMMISSION...............	388	-	-	-	-	-	-	388	-
GENERAL SERVICES ADMINISTRATION........	215	-	-	-	-	-	194	-	21
LIBRARY OF CONGRESS....................	968	-	-	-	-	-	-	-	968
NATIONAL AERONAUTICS & SPACE ADMIN.....	1,409,732	78,229	3,664	290,271	297,629	2,350	736,359	1,230	-
NATIONAL SCIENCE FOUNDATION............	274,789	60,119	7,720	76,276	59,270	17,161	25,927	19,582	8,734
OFFICE OF ECONOMIC OPPORTUNITY.........	29,400	2,600	5,000	-	-	-	-	21,800	-
OFFICE OF EMERGENCY PREPAREDNESS.......	1,016	-	-	-	-	-	531	-	485
OFFICE OF SCIENCE AND TECHNOLOGY.......	929	284	10	237	83	18	279	18	-
SMALL BUSINESS ADMINISTRATION..........	101	-	-	-	-	-	-	101	-
SMITHSONIAN INSTITUTION................	18,217	7,709	-	3,195	586	-	-	6,727	-
TENNESSEE VALLEY AUTHORITY.............	6,376	1,727	-	890	-	-	3,406	353	-
US ARMS CONTROL & DISARMAMENT AGENCY...	3,732	-	-	303	40	-	2,811	395	183
UNITED STATES INFORMATION AGENCY.......	157	-	-	-	-	-	157	-	-
VETERANS ADMINISTRATION................	57,762	52,177	4,300	700	-	60	350	175	-

TABLE C-15. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOL-OGY	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATHE-MATICS	ENGI-NEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
TOTAL, ALL AGENCIES....................	5,995,123	1,735,136	125,166	1,025,477	632,124	103,963	2,013,906	272,994	86,357
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	292,610	180,306	31	38,910	5,196	705	31,137	36,066	259
AGRICULTURAL RESEARCH SERVICE..........	163,281	106,391	31	32,223	911	334	22,246	1,145	-
COOPERATIVE STATE RESEARCH SERVICE.....	66,999	46,087	-	3,350	371	-	2,295	14,896	-
ECONOMIC RESEARCH SERVICE..............	15,688	-	-	-	-	-	-	15,688	-
FARMER COOPERATIVE SERVICE.............	945	-	-	-	-	-	-	945	-
FOREST SERVICE.........................	44,950	27,828	-	3,337	3,914	156	6,596	3,119	-
NATIONAL AGRICULTURAL LIBRARY..........	259	-	-	-	-	-	-	-	259
STATISTICAL REPORTING SERVICE..........	488	-	-	-	-	215	-	273	-
DEPARTMENT OF COMMERCE, TOTAL..........	128,050	32,204	1,449	19,552	29,450	1,820	30,817	10,060	2,698
BUREAU OF THE CENSUS...................	2,165	-	744	-	-	347	-	1,074	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	1,844	-	-	-	-	-	-	1,844	-
MARITIME ADMINISTRATION................	17,493	-	-	-	-	-	15,905	1,588	-
NATIONAL BUREAU OF STANDARDS...........	28,902	-	-	16,573	-	1,035	9,901	-	1,393
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	70,545	32,204	705	1,835	29,450	-	3,951	1,550	850
OFFICE OF BUSINESS ECONOMICS...........	4,004	-	-	-	-	-	-	4,004	-
OFFICE OF TELECOMMUNICATIONS...........	2,642	-	-	1,144	-	438	1,060	-	-
PATENT OFFICE..........................	455	-	-	-	-	-	-	-	455
DEPARTMENT OF DEFENSE, TOTAL...........	1,479,333	93,210	28,526	197,686	132,557	61,156	922,162	4,552	39,484
DEPARTMENT OF THE ARMY.................	256,258	45,022	5,881	52,258	13,214	5,477	118,351	2,443	13,612
DEPARTMENT OF THE NAVY.................	268,000	16,143	5,852	61,260	44,681	27,829	111,774	-	461
DEPARTMENT OF THE AIR FORCE............	644,000	26,501	11,230	26,493	27,188	6,211	546,077	300	-
DEFENSE AGENCIES.......................	307,523	5,074	5,271	57,075	47,474	21,291	145,071	1,359	24,908
DEPARTMENTWIDE FUNDS...................	3,552	470	292	600	-	348	889	450	503
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	1,362,222	1,060,505	69,178	52,315	763	10,092	27,294	124,484	17,591
FOOD AND DRUG ADMINISTRATION...........	25,922	16,174	-	9,748	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	189,286	117,063	35,481	1,156	-	635	66	33,479	1,406
NATIONAL INSTITUTES OF HEALTH..........	1,030,707	913,938	20,574	41,411	763	9,457	27,078	1,301	16,185
OFFICE OF CHILD DEVELOPMENT............	2,000	500	500	-	-	-	-	1,000	-
OFFICE OF EDUCATION....................	68,600	-	9,548	-	-	-	-	59,052	-
SOCIAL AND REHABILITATION SERVICE......	32,200	12,830	3,075	-	-	-	150	16,145	-
SOCIAL SECURITY ADMINISTRATION.........	13,507	-	-	-	-	-	-	13,507	-
DEPARTMENT OF HOUSING & URBAN DEVELOP..	11,862	-	-	-	-	-	11,862	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	134,561	23,159	62	13,495	48,361	2,136	45,405	1,719	224
BONNEVILLE POWER ADMINISTRATION........	474	-	-	27	46	20	381	-	-
BUREAU OF LAND MANAGEMENT..............	755	698	-	-	-	-	-	57	-
BUREAU OF MINES........................	38,056	-	-	7,355	2,540	750	27,411	-	-
BUREAU OF OUTDOOR RECREATION...........	133	-	-	-	-	-	-	133	-
BUREAU OF RECLAMATION..................	9,018	22	-	-	6,525	-	2,406	65	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	20,132	20,132	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	43,196	-	-	4,054	36,757	994	1,391	-	-
OFFICE OF COAL RESEARCH................	4,809	-	-	-	-	-	4,809	-	-
OFFICE OF SALINE WATER.................	5,000	-	-	1,600	-	-	3,400	-	-
OFFICE OF THE SECRETARY................	583	-	-	-	-	-	583	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	12,405	2,307	62	459	2,493	372	5,024	1,464	224
DEPARTMENT OF JUSTICE, TOTAL...........	6,210	778	1,191	719	-	295	363	2,864	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	1,560	778	16	39	-	-	-	727	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	4,650	-	1,175	680	-	295	363	2,137	-
DEPARTMENT OF LABOR, TOTAL.............	12,495	-	-	-	-	-	-	12,495	-
BUREAU OF LABOR STATISTICS.............	2,615	-	-	-	-	-	-	2,615	-
LABOR-MANAGEMENT SERVICES ADMIN........	720	-	-	-	-	-	-	720	-

TABLE C-15. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOLOGY	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATHEMATICS	ENGINEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
POSTAL SERVICE........................	5,568	-	-	-	-	-	-	-	5,568
DEPARTMENT OF STATE, TOTAL............	25,359	18,731	103	-	60	-	1,210	5,255	-
DEPARTMENTAL FUNDS....................	350	-	-	-	-	-	-	350	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	24,906	18,731	-	-	60	-	1,210	4,905	-
PEACE CORPS...........................	103	-	103	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	110,895	3,127	2,737	95	15,742	1,553	75,640	11,791	210
FEDERAL AVIATION ADMINISTRATION........	23,018	1,667	443	-	768	500	19,640	-	-
FEDERAL HIGHWAY ADMINISTRATION.........	27,468	-	-	-	-	-	26,012	1,456	-
FEDERAL RAILROAD ADMINISTRATION........	9,846	310	215	-	-	-	5,986	3,335	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	13,072	1,150	2,059	-	-	848	8,940	75	-
OFFICE OF THE SECRETARY................	15,594	-	-	-	694	-	10,000	4,900	-
UNITED STATES COAST GUARD..............	15,931	-	-	95	14,180	-	1,656	-	-
URBAN MASS TRANSPORTATION ADMIN........	5,966	-	20	-	100	205	3,406	2,025	210
DEPARTMENT OF THE TREASURY, TOTAL......	373	-	-	355	-	-	18	-	-
BUREAU OF ENGRAVING AND PRINTING.......	373	-	-	355	-	-	18	-	-
OTHER AGENCIES									
ADVISORY COMM ON INTERGOVT RELATIONS...	477	-	-	-	-	-	-	477	-
ATOMIC ENERGY COMMISSION...............	423,415	79,652	-	292,395	9,298	5,370	36,700	-	-
CIVIL AERONAUTICS BOARD................	270	-	-	-	-	-	-	270	-
CIVIL SERVICE COMMISSION...............	327	-	327	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	61,482	21,674	7	9,471	5,609	274	23,781	666	-
FEDERAL COMMUNICATIONS COMMISSION......	638	-	-	-	-	-	638	-	-
FEDERAL HOME LOAN BANK BOARD...........	388	-	-	-	-	-	-	388	-
FEDERAL TRADE COMMISSION...............	467	-	-	-	-	-	-	467	-
GENERAL SERVICES ADMINISTRATION........	83	-	-	-	-	-	63	-	20
LIBRARY OF CONGRESS....................	1,006	-	-	-	-	-	-	-	1,006
NATIONAL AERONAUTICS & SPACE ADMIN.....	1,477,583	77,898	3,384	313,744	314,388	1,410	766,759	-	-
NATIONAL SCIENCE FOUNDATION............	327,286	71,290	8,660	80,976	69,915	19,073	33,290	25,444	18,638
OFFICE OF ECONOMIC OPPORTUNITY.........	39,150	6,900	5,000	-	-	-	-	27,250	-
OFFICE OF EMERGENCY PREPAREDNESS.......	995	-	-	-	-	-	498	-	497
OFFICE OF SCIENCE AND TECHNOLOGY.......	990	303	11	253	88	19	297	19	-
SMITHSONIAN INSTITUTION................	20,346	8,606	-	3,560	651	-	-	7,529	-
TENNESSEE VALLEY AUTHORITY.............	7,478	1,949	-	976	-	-	4,125	428	-
US ARMS CONTROL & DISARMAMENT AGENCY...	2,335	-	-	225	46	-	1,317	585	162
UNITED STATES INFORMATION AGENCY.......	160	-	-	-	-	-	160	-	-
VETERANS ADMINISTRATION................	60,709	54,844	4,500	750	-	60	370	185	-

TABLE C-16. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOL-OGY	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATHE-MATICS	ENGI-NEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
TOTAL, ALL AGENCIES....................	6,643,584	1,945,097	140,413	1,086,483	701,988	111,770	2,197,655	311,018	149,160
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	303,470	189,267	31	39,247	5,265	704	31,420	37,273	263
AGRICULTURAL RESEARCH SERVICE..........	167,378	110,455	31	32,215	912	332	22,287	1,146	-
COOPERATIVE STATE RESEARCH SERVICE.....	73,602	50,609	-	3,680	428	-	2,522	16,363	-
ECONOMIC RESEARCH SERVICE..............	15,428	-	-	-	-	-	-	15,428	-
FARMER COOPERATIVE SERVICE.............	943	-	-	-	-	-	-	943	-
FOREST SERVICE.........................	45,368	28,203	-	3,352	3,925	157	6,611	3,120	-
NATIONAL AGRICULTURAL LIBRARY..........	263	-	-	-	-	-	-	-	263
STATISTICAL REPORTING SERVICE..........	488	-	-	-	-	215	-	273	-
DEPARTMENT OF COMMERCE, TOTAL..........	143,772	38,974	1,466	20,398	35,642	2,098	32,589	9,465	3,140
BUREAU OF THE CENSUS...................	1,904	-	613	-	-	347	-	944	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	1,591	-	-	-	-	-	-	1,591	-
MARITIME ADMINISTRATION................	14,445	-	-	-	-	-	13,895	550	-
NATIONAL BUREAU OF STANDARDS...........	30,480	-	-	17,233	-	1,034	10,571	-	1,642
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	85,374	38,974	853	2,222	35,642	-	4,783	1,872	1,028
OFFICE OF BUSINESS ECONOMICS...........	4,508	-	-	-	-	-	-	4,508	-
OFFICE OF TELECOMMUNICATIONS...........	5,000	-	-	943	-	717	3,340	-	-
PATENT OFFICE..........................	470	-	-	-	-	-	-	-	470
DEPARTMENT OF DEFENSE, TOTAL...........	1,633,562	99,801	35,703	214,086	133,415	63,470	1,021,720	8,110	57,257
DEPARTMENT OF THE ARMY.................	280,428	46,019	10,142	55,479	14,052	5,044	130,952	6,230	12,510
DEPARTMENT OF THE NAVY.................	292,000	19,045	7,160	66,622	48,295	31,031	119,847	-	-
DEPARTMENT OF THE AIR FORCE............	698,000	29,509	13,348	26,451	27,894	6,141	594,354	303	-
DEFENSE AGENCIES.......................	359,434	4,739	4,749	64,910	43,174	20,886	175,642	1,110	44,224
DEPARTMENTWIDE FUNDS...................	3,700	489	304	624	-	368	925	467	523
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	1,489,758	1,174,816	74,336	60,305	872	11,191	31,049	116,866	20,323
FOOD AND DRUG ADMINISTRATION...........	33,916	21,909	-	12,007	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	188,491	112,943	38,678	996	-	389	44	33,517	1,924
NATIONAL INSTITUTES OF HEALTH..........	1,154,422	1,021,764	22,900	47,302	872	10,802	30,905	1,478	18,399
OFFICE OF CHILD DEVELOPMENT............	3,500	1,000	500	-	-	-	-	2,000	-
OFFICE OF EDUCATION....................	63,213	-	9,838	-	-	-	-	53,375	-
SOCIAL AND REHABILITATION SERVICE......	31,930	17,200	2,420	-	-	-	100	12,210	-
SOCIAL SECURITY ADMINISTRATION.........	14,286	-	-	-	-	-	-	14,286	-
DEPARTMENT OF HOUSING & URBAN DEVELOP..	12,740	-	-	-	-	-	12,740	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	144,366	24,415	68	16,739	52,175	1,974	46,942	1,810	243
BONNEVILLE POWER ADMINISTRATION........	495	-	-	44	-	20	431	-	-
BUREAU OF LAND MANAGEMENT..............	793	735	-	-	-	-	-	58	-
BUREAU OF MINES........................	39,541	-	-	10,256	828	506	27,951	-	-
BUREAU OF OUTDOOR RECREATION...........	76	-	-	-	-	-	-	76	-
BUREAU OF RECLAMATION..................	9,523	7	-	-	6,700	-	2,736	80	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	21,158	21,158	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	48,530	-	-	4,239	41,789	1,042	1,460	-	-
OFFICE OF COAL RESEARCH................	4,059	-	-	-	-	-	4,059	-	-
OFFICE OF SALINE WATER.................	5,475	-	-	1,700	-	-	3,775	-	-
OFFICE OF THE SECRETARY................	1,193	-	-	-	140	-	1,053	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	13,523	2,515	68	500	2,718	406	5,477	1,596	243
DEPARTMENT OF JUSTICE, TOTAL...........	15,162	1,399	2,115	2,864	-	1,648	1,990	5,146	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	2,162	1,399	-	254	-	38	-	471	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	13,000	-	2,115	2,610	-	1,610	1,990	4,675	-
DEPARTMENT OF LABOR, TOTAL.............	12,642	-	-	-	-	-	-	12,642	-
BUREAU OF LABOR STATISTICS.............	2,617	-	-	-	-	-	-	2,617	-
LABOR-MANAGEMENT SERVICES ADMIN........	812	-	-	-	-	-	-	812	-
MANPOWER ADMINISTRATION................	6,680	-	-	-	-	-	-	6,680	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,533	-	-	-	-	-	-	2,533	-

CONTINUED ON NEXT PAGE

TABLE C-16. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOL-OGY	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATHE-MATICS	ENGI-NEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
POSTAL SERVICE	5,860	-	-	-	-	-	-	-	5,860
DEPARTMENT OF STATE, TOTAL	28,204	19,219	-	-	200	-	1,705	7,080	-
DEPARTMENTAL FUNDS	650	-	-	-	-	-	-	650	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	27,554	19,219	-	-	200	-	1,705	6,430	-
DEPARTMENT OF TRANSPORTATION, TOTAL	183,949	4,805	5,250	825	19,788	2,247	133,579	17,455	-
FEDERAL AVIATION ADMINISTRATION	60,371	1,805	480	-	3,000	500	54,586	-	-
FEDERAL HIGHWAY ADMINISTRATION	32,148	-	-	-	-	-	30,448	1,700	-
FEDERAL RAILROAD ADMINISTRATION	10,500	500	250	-	-	-	5,765	3,985	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN	22,950	2,500	4,500	-	-	1,300	14,650	-	-
OFFICE OF THE SECRETARY	31,000	-	-	-	675	-	20,750	9,575	-
UNITED STATES COAST GUARD	20,568	-	-	825	15,013	-	4,730	-	-
URBAN MASS TRANSPORTATION ADMIN	6,412	-	20	-	1,100	447	2,650	2,195	-
DEPARTMENT OF THE TREASURY, TOTAL	390	-	-	372	-	-	18	-	-
BUREAU OF ENGRAVING AND PRINTING	390	-	-	372	-	-	18	-	-
OTHER AGENCIES									
ADVISORY COMM ON INTERGOVT RELATIONS	487	-	-	-	-	-	-	487	-
ATOMIC ENERGY COMMISSION	411,384	79,294	-	281,858	9,580	4,800	35,852	-	-
CIVIL AERONAUTICS BOARD	331	-	-	-	-	-	-	331	-
CIVIL SERVICE COMMISSION	350	-	350	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY	78,730	27,890	7	10,723	6,914	347	32,041	808	-
FEDERAL COMMUNICATIONS COMMISSION	869	-	-	-	-	-	869	-	-
FEDERAL HOME LOAN BANK BOARD	497	-	-	-	-	-	-	497	-
FEDERAL TRADE COMMISSION	460	-	-	-	-	-	-	460	-
GENERAL SERVICES ADMINISTRATION	20	-	-	-	-	-	-	-	20
LIBRARY OF CONGRESS	1,175	-	-	-	-	-	-	-	1,175
NATIONAL AERONAUTICS & SPACE ADMIN	1,561,917	125,326	2,792	330,376	349,873	2,000	751,550	-	-
NATIONAL SCIENCE FOUNDATION	470,036	87,528	13,783	101,871	87,424	21,210	56,665	41,399	60,156
OFFICE OF ECONOMIC OPPORTUNITY	42,600	900	-	-	-	-	-	41,700	-
OFFICE OF EMERGENCY PREPAREDNESS	535	-	-	-	-	-	-	-	535
OFFICE OF SCIENCE AND TECHNOLOGY	1,080	330	12	277	96	21	324	20	-
SMALL BUSINESS ADMINISTRATION	205	-	-	-	-	-	-	205	-
SMITHSONIAN INSTITUTION	27,247	13,928	-	4,560	700	-	-	8,059	-
TENNESSEE VALLEY AUTHORITY	8,197	2,051	-	1,075	-	-	4,685	386	-
US ARMS CONTROL & DISARMAMENT AGENCY	2,420	-	-	157	44	-	1,397	634	188
UNITED STATES INFORMATION AGENCY	150	-	-	-	-	-	150	-	-
VETERANS ADMINISTRATION	61,019	55,154	4,500	750	-	60	370	185	-

TABLE C-17. FEDERAL OBLIGATIONS FOR RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	PSYCHOLOGY				PHYSICAL SCIENCES				
	TOTAL	BIOLOGICAL ASPECTS	SOCIAL ASPECTS	PSYCHO-LOGICAL SCIENCES NEC	TOTAL	ASTRONOMY	CHEMISTRY	PHYSICS	PHYSICAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	113,328	45,141	64,175	4,012	1,010,450	210,950	243,894	538,333	17,273
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	32	-	32	-	36,908	-	30,186	6,722	-
AGRICULTURAL RESEARCH SERVICE..........	32	-	32	-	30,757	-	25,439	5,318	-
COOPERATIVE STATE RESEARCH SERVICE.....	-	-	-	-	3,053	-	3,053	-	-
FOREST SERVICE.........................	-	-	-	-	3,098	-	1,694	1,404	-
DEPARTMENT OF COMMERCE, TOTAL..........	1,096	529	567	-	17,156	823	7,402	8,598	333
BUREAU OF THE CENSUS...................	567	-	567	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	-	-	-	-	15,779	823	6,025	8,598	333
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	529	529	-	-	1,377	-	1,377	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	25,594	5,885	18,056	1,653	219,639	10,591	39,962	154,034	15,052
DEPARTMENT OF THE ARMY.................	6,942	3,209	3,276	457	64,021	8	26,897	30,259	6,857
DEPARTMENT OF THE NAVY.................	6,257	1,040	4,850	367	62,509	4,040	5,779	49,651	3,039
DEPARTMENT OF THE AIR FORCE............	6,384	538	5,846	-	31,536	6,397	6,109	19,030	-
DEFENSE AGENCIES.......................	5,728	1,063	3,836	829	60,892	146	1,157	54,433	5,156
DEPARTMENTWIDE FUNDS...................	283	35	248	-	681	-	20	661	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	60,484	26,295	33,790	399	41,283	-	40,725	94	464
FOOD AND DRUG ADMINISTRATION...........	-	-	-	-	6,313	-	6,313	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	33,971	15,727	18,146	98	734	-	734	-	-
NATIONAL INSTITUTES OF HEALTH..........	17,715	10,568	7,147	-	34,236	-	33,678	94	464
OFFICE OF EDUCATION....................	6,825	-	6,524	301	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	1,973	-	1,973	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	58	-	58	-	13,952	-	12,148	1,804	-
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	25	-	-	25	-
BUREAU OF MINES........................	-	-	-	-	7,462	-	6,642	820	-
GEOLOGICAL SURVEY......................	-	-	-	-	3,891	-	2,941	950	-
OFFICE OF SALINE WATER.................	-	-	-	-	2,174	-	2,174	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	58	-	58	-	400	-	391	9	-
DEPARTMENT OF JUSTICE, TOTAL...........	1,239	-	1,239	-	630	-	-	630	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	114	-	114	-	-	-	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	1,125	-	1,125	-	630	-	-	630	-
DEPARTMENT OF STATE, TOTAL.............	143	-	143	-	-	-	-	-	-
PEACE CORPS............................	143	-	143	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	3,701	395	3,306	-	32	-	-	32	-
FEDERAL AVIATION ADMINISTRATION........	395	395	-	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	3,286	-	3,286	-	-	-	-	-	-
UNITED STATES COAST GUARD..............	-	-	-	-	32	-	-	32	-
URBAN MASS TRANSPORTATION ADMIN........	20	-	20	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL......	-	-	-	-	270	-	70	40	160

AGRICULTURAL RESEARCH SERVICE..........	32	-	32	-	30,757	-	25,439	5,318	
COOPERATIVE STATE RESEARCH SERVICE.....	-	-	-	-	3,053	-	3,053	-	-
FOREST SERVICE.........................	-	-	-	-	3,098	-	1,694	1,404	-
DEPARTMENT OF COMMERCE, TOTAL..........	1,096	529	567	-	17,156	823	7,402	8,598	333
BUREAU OF THE CENSUS...................	567	-	567	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	-	-	-	-	15,779	823	6,025	8,598	333
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	529	529	-	-	1,377	-	1,377	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	25,594	5,885	18,056	1,653	219,639	10,591	39,962	154,034	15,052
DEPARTMENT OF THE ARMY.................	6,942	3,209	3,276	457	64,021	8	26,897	30,259	6,857
DEPARTMENT OF THE NAVY.................	6,257	1,040	4,850	367	62,509	4,040	5,779	49,651	3,039
DEPARTMENT OF THE AIR FORCE............	6,384	538	5,846	-	31,536	6,397	6,109	19,030	-
DEFENSE AGENCIES.......................	5,728	1,063	3,836	829	60,892	146	1,157	54,433	5,156
DEPARTMENTWIDE FUNDS...................	283	35	248	-	681	-	20	661	-
DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL	60,484	26,295	33,790	399	41,283	-	40,725	94	464
FOOD AND DRUG ADMINISTRATION...........	-	-	-	-	6,313	-	6,313	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	33,971	15,727	18,146	98	734	-	734	-	-
NATIONAL INSTITUTES OF HEALTH..........	17,715	10,568	7,147	-	34,236	-	33,678	94	464
OFFICE OF EDUCATION....................	6,825	-	6,524	301	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	1,973	-	1,973	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	58	-	58	-	13,952	-	12,148	1,804	-
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	25	-	-	25	-
BUREAU OF MINES........................	-	-	-	-	7,462	-	6,642	820	-
GEOLOGICAL SURVEY......................	-	-	-	-	3,891	-	2,941	950	-
OFFICE OF SALINE WATER.................	-	-	-	-	2,174	-	2,174	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	58	-	58	-	400	-	391	9	-
DEPARTMENT OF JUSTICE, TOTAL...........	1,239	-	1,239	-	630	-	-	630	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	114	-	114	-	-	-	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	1,125	-	1,125	-	630	-	-	630	-
DEPARTMENT OF STATE, TOTAL.............	143	-	143	-	-	-	-	-	-
PEACE CORPS............................	143	-	143	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	3,701	395	3,306	-	32	-	-	32	-
FEDERAL AVIATION ADMINISTRATION........	395	395	-	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	3,286	-	3,286	-	32	-	-	32	-
UNITED STATES COAST GUARD..............	-	-	-	-	-	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	20	-	20	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL......	-	-	-	-	270	-	70	40	160
BUREAU OF ENGRAVING AND PRINTING.......	-	-	-	-	270	-	70	40	160
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	-	-	-	-	300,278	-	64,218	236,060	-
CIVIL SERVICE COMMISSION...............	279	-	279	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	8	8	-	-	8,430	-	5,421	2,073	936
NATIONAL AERONAUTICS & SPACE ADMIN.....	3,664	3,664	-	-	290,271	176,404	19,843	94,024	-
NATIONAL SCIENCE FOUNDATION............	7,720	4,300	1,460	1,960	76,276	19,922	22,241	33,785	328
OFFICE OF ECONOMIC OPPORTUNITY.........	5,000	-	5,000	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	10	5	5	-	237	15	75	147	-
SMITHSONIAN INSTITUTION................	-	-	-	-	3,195	3,195	-	-	-
TENNESSEE VALLEY AUTHORITY.............	-	-	-	-	890	-	890	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	-	-	-	-	303	-	303	-	-
VETERANS ADMINISTRATION................	4,300	4,060	240	-	700	-	410	290	-

TABLE C-18. FEDERAL OBLIGATIONS FOR RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	PSYCHOLOGY				PHYSICAL SCIENCES				
	TOTAL	BIOLOGICAL ASPECTS	SOCIAL ASPECTS	PSYCHO- LOGICAL SCIENCES NEC	TOTAL	ASTRONOMY	CHEMISTRY	PHYSICS	PHYSICAL SCIENCES NEC
TOTAL, ALL AGENCIES	125,166	47,379	74,569	3,218	1,025,477	222,196	246,627	536,306	20,348
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL	31	-	31	-	38,910	-	31,806	7,104	-
AGRICULTURAL RESEARCH SERVICE	31	-	31	-	32,223	-	26,631	5,592	-
COOPERATIVE STATE RESEARCH SERVICE	-	-	-	-	3,350	-	3,350	-	-
FOREST SERVICE	-	-	-	-	3,337	-	1,825	1,512	-
DEPARTMENT OF COMMERCE, TOTAL	1,449	705	744	-	19,552	859	8,117	9,084	1,492
BUREAU OF THE CENSUS	744	-	744	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS	-	-	-	-	16,573	859	6,282	9,084	348
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	705	705	-	-	1,835	-	1,835	-	-
OFFICE OF TELECOMMUNICATIONS	-	-	-	-	1,144	-	-	-	1,144
DEPARTMENT OF DEFENSE, TOTAL	28,526	4,947	21,622	1,957	197,686	7,479	32,658	140,893	16,656
DEPARTMENT OF THE ARMY	5,881	2,241	3,201	439	52,258	140	19,497	26,528	6,093
DEPARTMENT OF THE NAVY	5,852	893	4,519	440	61,260	3,178	6,192	48,992	2,898
DEPARTMENT OF THE AIR FORCE	11,230	675	10,555	-	26,493	4,061	6,014	16,418	-
DEFENSE AGENCIES	5,271	1,108	3,085	1,078	57,075	100	949	48,361	7,665
DEPARTMENTWIDE FUNDS	292	30	262	-	600	-	6	594	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	69,178	27,227	41,020	931	52,315	-	51,641	117	557
FOOD AND DRUG ADMINISTRATION	-	-	-	-	9,748	-	9,748	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN.	35,481	14,904	19,706	871	1,156	-	1,156	-	-
NATIONAL INSTITUTES OF HEALTH	20,574	12,323	8,251	-	41,411	-	40,737	117	557
OFFICE OF CHILD DEVELOPMENT	500	-	500	-	-	-	-	-	-
OFFICE OF EDUCATION	9,548	-	9,488	60	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE	3,075	-	3,075	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL	62	-	62	-	13,495	-	11,610	1,885	-
BONNEVILLE POWER ADMINISTRATION	-	-	-	-	27	-	-	27	-
BUREAU OF MINES	-	-	-	-	7,355	-	6,503	852	-
GEOLOGICAL SURVEY	-	-	-	-	4,054	-	3,060	994	-
OFFICE OF SALINE WATER	-	-	-	-	1,600	-	1,600	-	-
OFFICE OF WATER RESOURCES RESEARCH	62	-	62	-	459	-	447	12	-
DEPARTMENT OF JUSTICE, TOTAL	1,191	-	1,191	-	719	-	39	680	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	16	-	16	-	39	-	39	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.	1,175	-	1,175	-	680	-	-	680	-
DEPARTMENT OF STATE, TOTAL	103	-	103	-	-	-	-	-	-
PEACE CORPS	103	-	103	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL	2,737	443	2,294	-	95	-	-	95	-
FEDERAL AVIATION ADMINISTRATION	443	443	-	-	-	-	-	-	-

DEPARTMENT OF AGRICULTURE, TOTAL.......	31	-	31	-	38,910	-	31,806	7,104	-
AGRICULTURAL RESEARCH SERVICE..........	31	-	31	-	32,223	-	26,631	5,592	-
COOPERATIVE STATE RESEARCH SERVICE.....	-	-	-	-	3,350	-	3,350	-	-
FOREST SERVICE.........................	-	-	-	-	3,337	-	1,825	1,512	-
DEPARTMENT OF COMMERCE, TOTAL..........	1,449	705	744	-	19,552	859	8,117	9,084	1,492
BUREAU OF THE CENSUS...................	744	-	744	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	-	-	-	-	16,573	859	6,282	9,084	348
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	705	705	-	-	1,835	-	1,835	-	-
OFFICE OF TELECOMMUNICATIONS...........	-	-	-	-	1,144	-	-	-	1,144
DEPARTMENT OF DEFENSE, TOTAL...........	28,526	4,947	21,622	1,957	197,686	7,479	32,658	140,893	16,656
DEPARTMENT OF THE ARMY.................	5,881	2,241	3,201	439	52,258	140	19,497	26,528	6,093
DEPARTMENT OF THE NAVY.................	5,852	893	4,519	440	61,260	3,178	6,192	48,992	2,898
DEPARTMENT OF THE AIR FORCE............	11,230	675	10,555	-	26,493	4,061	6,014	16,418	-
DEFENSE AGENCIES.......................	5,271	1,108	3,085	1,078	57,075	100	949	48,361	7,665
DEPARTMENTWIDE FUNDS...................	292	30	262	-	600	-	6	594	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	69,178	27,227	41,020	931	52,315	-	51,641	117	557
FOOD AND DRUG ADMINISTRATION...........	-	-	-	-	9,748	-	9,748	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	35,481	14,904	19,706	871	1,156	-	1,156	-	-
NATIONAL INSTITUTES OF HEALTH..........	20,574	12,323	8,251	-	41,411	-	40,737	117	557
OFFICE OF CHILD DEVELOPMENT............	500	-	500	-	-	-	-	-	-
OFFICE OF EDUCATION....................	9,548	-	9,488	60	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	3,075	-	3,075	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	62	-	62	-	13,495	-	11,610	1,885	-
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	27	-	-	27	-
BUREAU OF MINES........................	-	-	-	-	7,355	-	6,503	852	-
GEOLOGICAL SURVEY......................	-	-	-	-	4,054	-	3,060	994	-
OFFICE OF SALINE WATER.................	-	-	-	-	1,600	-	1,600	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	62	-	62	-	459	-	447	12	-
DEPARTMENT OF JUSTICE, TOTAL...........	1,191	-	1,191	-	719	-	39	680	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	16	-	16	-	39	-	39	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	1,175	-	1,175	-	680	-	-	680	-
DEPARTMENT OF STATE, TOTAL.............	103	-	103	-	-	-	-	-	-
PEACE CORPS............................	103	-	103	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	2,737	443	2,294	-	95	-	-	95	-
FEDERAL AVIATION ADMINISTRATION........	443	443	-	-	-	-	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	215	-	215	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	2,059	-	2,059	-	-	-	-	-	-
UNITED STATES COAST GUARD..............	-	-	-	-	95	-	-	95	-
URBAN MASS TRANSPORTATION ADMIN........	20	-	20	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL......	-	-	-	-	355	-	90	50	215
BUREAU OF ENGRAVING AND PRINTING.......	-	-	-	-	355	-	90	50	215
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	-	-	-	-	292,395	-	61,173	231,222	-
CIVIL SERVICE COMMISSION...............	327	-	327	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	7	7	-	-	9,471	-	6,200	1,938	1,333
NATIONAL AERONAUTICS & SPACE ADMIN.....	3,384	3,384	-	-	313,744	187,045	17,871	108,828	-
NATIONAL SCIENCE FOUNDATION............	8,660	6,420	1,910	330	80,976	23,236	23,691	33,954	95
OFFICE OF ECONOMIC OPPORTUNITY.........	5,000	-	5,000	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	11	6	5	-	253	17	80	156	-
SMITHSONIAN INSTITUTION................	-	-	-	-	3,560	3,560	-	-	-
TENNESSEE VALLEY AUTHORITY.............	-	-	-	-	976	-	976	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	-	-	-	-	225	-	225	-	-
VETERANS ADMINISTRATION................	4,500	4,240	260	-	750	-	450	300	-

TABLE C-19. FEDERAL OBLIGATIONS FOR RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	PSYCHOLOGY				PHYSICAL SCIENCES				
	TOTAL	BIOLOGICAL ASPECTS	SOCIAL ASPECTS	PSYCHO-LOGICAL SCIENCES NEC	TOTAL	ASTRONOMY	CHEMISTRY	PHYSICS	PHYSICAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	140,413	58,390	79,054	2,969	1,086,483	198,772	304,348	568,421	14,942
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	31	-	31	-	39,247	-	32,145	7,102	-
AGRICULTURAL RESEARCH SERVICE..........	31	-	31	-	32,215	-	26,632	5,583	-
COOPERATIVE STATE RESEARCH SERVICE.....	-	-	-	-	3,680	-	3,680	-	-
FOREST SERVICE.........................	-	-	-	-	3,352	-	1,833	1,519	-
DEPARTMENT OF COMMERCE, TOTAL..........	1,466	853	613	-	20,398	858	8,822	10,370	348
BUREAU OF THE CENSUS...................	613	-	613	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	-	-	-	-	17,233	858	6,600	9,427	348
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	853	853	-	-	2,222	-	2,222	-	-
OFFICE OF TELECOMMUNICATIONS...........	-	-	-	-	943	-	-	943	-
DEPARTMENT OF DEFENSE, TOTAL...........	35,703	6,557	27,436	1,710	214,086	7,197	36,137	159,037	11,715
DEPARTMENT OF THE ARMY.................	10,142	3,899	5,833	410	55,479	11	23,113	26,165	6,190
DEPARTMENT OF THE NAVY.................	7,160	917	5,843	400	66,622	3,012	6,745	53,975	2,890
DEPARTMENT OF THE AIR FORCE............	13,348	490	12,858	-	26,451	4,174	5,723	16,554	-
DEFENSE AGENCIES.......................	4,749	1,220	2,629	900	64,910	-	550	61,725	2,635
DEPARTMENTWIDE FUNDS...................	304	31	273	-	624	-	6	618	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	74,336	32,854	40,556	926	60,305	-	59,536	133	636
FOOD AND DRUG ADMINISTRATION...........	-	-	-	-	12,007	-	12,007	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	38,678	19,214	18,538	926	996	-	996	-	-
NATIONAL INSTITUTES OF HEALTH..........	22,900	13,640	9,260	-	47,302	-	46,533	133	636
OFFICE OF CHILD DEVELOPMENT............	500	-	500	-	-	-	-	-	-
OFFICE OF EDUCATION....................	9,838	-	9,838	-	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	2,420	-	2,420	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	68	-	68	-	16,739	-	12,661	4,078	-
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	44	-	-	44	-
BUREAU OF MINES........................	-	-	-	-	10,256	-	7,279	2,977	-
GEOLOGICAL SURVEY......................	-	-	-	-	4,239	-	3,197	1,042	-
OFFICE OF SALINE WATER.................	-	-	-	-	1,700	-	1,700	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	68	-	68	-	500	-	485	15	-
DEPARTMENT OF JUSTICE, TOTAL...........	2,115	-	2,115	-	2,864	-	254	2,610	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	-	-	-	-	254	-	254	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	2,115	-	2,115	-	2,610	-	-	2,610	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	5,250	480	4,770	-	825	-	-	825	-
FEDERAL AVIATION ADMINISTRATION........	480	480	-	-	-	-	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	250	-	250	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	4,500	-	4,500	-	-	-	-	-	-
UNITED STATES COAST GUARD..............	-	-	-	-	825	-	-	825	-
URBAN MASS TRANSPORTATION ADMIN........	20	-	20	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL......	-	-	-	-	372	-	95	55	222
BUREAU OF ENGRAVING AND PRINTING.......	-	-	-	-	372	-	95	55	222
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	-	-	-	-	281,858	-	59,278	222,580	-

BUREAU OF THE CENSUS....................	613	-	613	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS............	-	-	-	-	17,233	858	6,600	9,427	348
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	853	853	-	-	2,222	-	2,222	-	-
OFFICE OF TELECOMMUNICATIONS............	-	-	-	-	943	-	-	943	-
DEPARTMENT OF DEFENSE, TOTAL...........	35,703	6,557	27,436	1,710	214,086	7,197	36,137	159,037	11,715
DEPARTMENT OF THE ARMY..................	10,142	3,899	5,833	410	55,479	11	23,113	26,165	6,190
DEPARTMENT OF THE NAVY..................	7,160	917	5,843	400	66,622	3,012	6,745	53,975	2,890
DEPARTMENT OF THE AIR FORCE.............	13,348	490	12,858	-	26,451	4,174	5,723	16,554	-
DEFENSE AGENCIES........................	4,749	1,220	2,629	900	64,910	-	550	61,725	2,635
DEPARTMENTWIDE FUNDS....................	304	31	273	-	624	-	6	618	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	74,336	32,854	40,556	926	60,305	-	59,536	133	636
FOOD AND DRUG ADMINISTRATION............	-	-	-	-	12,007	-	12,007	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	38,678	19,214	18,538	926	996	-	996	-	-
NATIONAL INSTITUTES OF HEALTH..........	22,900	13,640	9,260	-	47,302	-	46,533	133	636
OFFICE OF CHILD DEVELOPMENT............	500	-	500	-	-	-	-	-	-
OFFICE OF EDUCATION....................	9,838	-	9,838	-	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	2,420	-	2,420	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	68	-	68	-	16,739	-	12,661	4,078	-
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	44	-	-	44	-
BUREAU OF MINES........................	-	-	-	-	10,256	-	7,279	2,977	-
GEOLOGICAL SURVEY......................	-	-	-	-	4,239	-	3,197	1,042	-
OFFICE OF SALINE WATER.................	-	-	-	-	1,700	-	1,700	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	68	-	68	-	500	-	485	15	-
DEPARTMENT OF JUSTICE, TOTAL...........	2,115	-	2,115	-	2,864	-	254	2,610	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	-	-	-	-	254	-	254	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	2,115	-	2,115	-	2,610	-	-	2,610	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	5,250	480	4,770	-	825	-	-	825	-
FEDERAL AVIATION ADMINISTRATION........	480	480	-	-	-	-	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	250	-	250	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	4,500	-	4,500	-	825	-	-	825	-
UNITED STATES COAST GUARD..............	-	-	-	-	-	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	20	-	20	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL......	-	-	-	-	372	-	95	55	222
BUREAU OF ENGRAVING AND PRINTING.......	-	-	-	-	372	-	95	55	222
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	-	-	-	-	281,858	-	59,278	222,580	-
CIVIL SERVICE COMMISSION...............	350	-	350	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	7	7	-	-	10,723	-	7,083	1,952	1,688
NATIONAL AERONAUTICS & SPACE ADMIN.....	2,792	2,792	-	-	330,376	157,445	57,691	115,240	-
NATIONAL SCIENCE FOUNDATION............	13,783	10,600	2,850	333	101,871	28,694	28,877	43,967	333
OFFICE OF SCIENCE AND TECHNOLOGY.......	12	7	5	-	277	18	87	172	-
SMITHSONIAN INSTITUTION................	-	-	-	-	4,560	4,560	-	-	-
TENNESSEE VALLEY AUTHORITY.............	-	-	-	-	1,075	-	1,075	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	-	-	-	-	157	-	157	-	-
VETERANS ADMINISTRATION................	4,500	4,240	260	-	750	-	450	300	-

FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	LIFE SCIENCES					ENVIRONMENTAL SCIENCES				
	TOTAL	BIO-LOGICAL	CLINICAL MEDICAL	OTHER MEDICAL SCIENCES	LIFE SCIENCES NEC	TOTAL	ATMOS-PHERIC	GEO-LOGICAL	OCEAN-OGRAPHY	ENVIRON-MENTAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	1,533,432	684,782	685,633	144,900	18,117	586,631	287,737	188,897	91,222	18,775
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	166,681	163,802	2,762	117	-	4,838	1,818	3,020	-	-
AGRICULTURAL RESEARCH SERVICE..........	98,631	98,514	-	117	-	859	211	648	-	-
COOPERATIVE STATE RESEARCH SERVICE.....	41,983	39,221	2,762	-	-	350	350	-	-	-
FOREST SERVICE.........................	26,067	26,067	-	-	-	3,629	1,257	2,372	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	24,157	24,157	-	-	-	22,090	15,109	4,545	2,436	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	24,157	24,157	-	-	-	22,090	15,109	4,545	2,436	-
DEPARTMENT OF DEFENSE, TOTAL...........	104,003	37,612	42,296	23,920	175	128,253	47,086	25,663	42,116	13,388
DEPARTMENT OF THE ARMY.................	52,863	21,755	30,943	-	165	13,941	8,281	3,500	1,910	250
DEPARTMENT OF THE NAVY.................	15,595	5,025	10,560	-	10	46,895	6,204	1,346	38,601	744
DEPARTMENT OF THE AIR FORCE............	26,707	2,200	587	23,920	-	25,800	23,468	2,332	-	-
DEFENSE AGENCIES.......................	8,218	8,218	-	-	-	41,617	9,133	18,485	1,605	12,394
DEPARTMENTWIDE FUNDS...................	620	414	206	-	-	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	897,108	201,387	585,535	110,186	-	630	-	-	-	630
FOOD AND DRUG ADMINISTRATION...........	15,492	11,837	3,655	-	-	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	99,050	22,621	76,429	-	-	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	770,946	166,929	493,831	110,186	-	630	-	-	-	630
OFFICE OF CHILD DEVELOPMENT............	500	-	500	-	-	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	11,120	-	11,120	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	20,716	20,682	-	-	34	43,570	4,910	37,456	1,171	33
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	-	31	-	31	-	-
BUREAU OF LAND MANAGEMENT..............	650	650	-	-	-	-	-	-	-	-
BUREAU OF MINES........................	-	-	-	-	-	1,821	-	1,760	61	-
BUREAU OF RECLAMATION..................	25	12	-	-	13	4,810	4,810	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	18,041	18,041	-	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	-	-	-	-	-	34,748	-	33,660	1,088	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	2,000	1,979	-	-	21	2,160	100	2,005	22	33
DEPARTMENT OF JUSTICE, TOTAL...........	326	326	-	-	-	-	-	-	-	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	326	326	-	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	14,421	10,497	3,924	-	-	-	-	-	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	14,421	10,497	3,924	-	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	3,145	1,371	123	-	1,651	15,379	400	100	13,050	1,829
FEDERAL AVIATION ADMINISTRATION........	1,484	1,361	123	-	-	400	400	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,651	-	-	-	1,651	-	-	-	-	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	249	-	-	-	249
UNITED STATES COAST GUARD..............	10	10	-	-	-	13,244	-	-	13,050	194
URBAN MASS TRANSPORTATION ADMIN........	-	-	-	-	-	1,486	-	100	-	1,386
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION...............	80,719	72,649	8,070	-	-	9,462	5,318	1,942	2,202	-
ENVIRONMENTAL PROTECTION AGENCY........	19,311	12,484	660	6,167	-	4,801	1,201	36	1,716	1,848
NATIONAL AERONAUTICS & SPACE ADMIN.....	78,229	61,106	5,352	-	11,771	297,629	186,471	103,700	7,458	-
NATIONAL SCIENCE FOUNDATION............	60,119	54,423	-	1,210	4.486	59,270	25,398	11,770	21,055	1,047
OFFICE OF ECONOMIC OPPORTUNITY.........	2,600	-	2,600	-	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	284	173	111	-	-	83	26	39	18	-
SMITHSONIAN INSTITUTION................	7,709	7,709	-	-	-	586	-	586	-	-
TENNESSEE VALLEY AUTHORITY.............	1,727	1,727	-	-	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	-	-	-	-	-	40	-	40	-	-
VETERANS ADMINISTRATION................	52,177	14,677	34,200	3,300	-	-	-	-	-	-

TABLE C-21. FEDERAL OBLIGATIONS FOR RESEARCH IN

FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	LIFE SCIENCES					ENVIRONMENTAL SCIENCES				
	TOTAL	BIO-LOGICAL	CLINICAL MEDICAL	OTHER MEDICAL SCIENCES	LIFE SCIENCES NEC	TOTAL	ATMOS-PHERIC	GEO-LOGICAL	OCEAN-OGRAPHY	ENVIRON-MENTAL SCIENCES NEC
TOTAL, ALL AGENCIES	1,735,136	735,295	804,177	168,361	27,303	632,124	311,193	193,223	97,290	30,418
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL	180,306	177,132	3,031	143	-	5,196	1,950	3,246	-	-
AGRICULTURAL RESEARCH SERVICE	106,391	106,248	-	143	-	911	222	689	-	-
COOPERATIVE STATE RESEARCH SERVICE	46,087	43,056	3,031	-	-	371	371	-	-	-
FOREST SERVICE	27,828	27,828	-	-	-	3,914	1,357	2,557	-	-
DEPARTMENT OF COMMERCE, TOTAL	32,204	32,204	-	-	-	29,450	20,143	6,060	3,247	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	32,204	32,204	-	-	-	29,450	20,143	6,060	3,247	-
DEPARTMENT OF DEFENSE, TOTAL	93,210	32,185	36,440	24,261	324	132,557	45,345	27,423	40,271	19,518
DEPARTMENT OF THE ARMY	45,022	19,796	25,102	-	124	13,214	7,464	3,225	2,350	175
DEPARTMENT OF THE NAVY	16,143	5,513	10,630	-	-	44,681	6,163	1,446	36,407	665
DEPARTMENT OF THE AIR FORCE	26,501	1,700	540	24,261	-	27,188	24,462	2,726	-	-
DEFENSE AGENCIES	5,074	4,874	-	-	200	47,474	7,256	20,026	1,514	18,678
DEPARTMENTWIDE FUNDS	470	302	168	-	-	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	1,060,505	227,390	700,129	132,986	-	763	-	-	-	763
FOOD AND DRUG ADMINISTRATION	16,174	16,174	-	-	-	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN.	117,063	22,275	94,788	-	-	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH	913,938	188,941	592,011	132,986	-	763	-	-	-	763
OFFICE OF CHILD DEVELOPMENT	500	-	500	-	-	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE	12,830	-	12,830	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL	23,159	23,129	-	-	30	48,361	6,640	40,615	1,069	37
BONNEVILLE POWER ADMINISTRATION	-	-	-	-	-	46	-	46	-	-
BUREAU OF LAND MANAGEMENT	698	698	-	-	-	-	-	-	-	-
BUREAU OF MINES	-	-	-	-	-	2,540	-	2,521	19	-
BUREAU OF RECLAMATION	22	12	-	-	10	6,525	6,525	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE	20,132	20,132	-	-	-	-	-	-	-	-
GEOLOGICAL SURVEY	-	-	-	-	-	36,757	-	35,729	1,028	-
OFFICE OF THE SECRETARY	-	-	-	-	-	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH	2,307	2,287	-	-	20	2,493	115	2,319	22	37
DEPARTMENT OF JUSTICE, TOTAL	778	778	-	-	-	-	-	-	-	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	778	778	-	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL	18,731	11,908	6,823	-	-	60	-	60	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	18,731	11,908	6,823	-	-	60	-	60	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL	3,127	1,517	150	310	1,150	15,742	768	100	14,127	747
FEDERAL AVIATION ADMINISTRATION	1,667	1,517	150	-	-	768	768	-	-	-
FEDERAL RAILROAD ADMINISTRATION	310	-	-	310	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.	1,150	-	-	-	1,150	-	-	-	-	-
OFFICE OF THE SECRETARY	-	-	-	-	-	694	-	-	-	694
UNITED STATES COAST GUARD	-	-	-	-	-	14,180	-	-	14,127	53
URBAN MASS TRANSPORTATION ADMIN	-	-	-	-	-	100	-	100	-	-
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION	79,652	71,552	8,100	-	-	9,298	5,160	1,995	2,143	-
ENVIRONMENTAL PROTECTION AGENCY	21,674	14,757	556	6,361	-	5,609	1,095	30	2,434	2,050
NATIONAL AERONAUTICS & SPACE ADMIN	77,898	52,737	5,946	-	19,215	314,388	204,783	100,008	9,597	-
NATIONAL SCIENCE FOUNDATION	71,290	63,706	-	1,000	6,584	69,915	25,281	12,947	24,384	7,303
OFFICE OF ECONOMIC OPPORTUNITY	6,900	-	6,900	-	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY	303	185	118	-	-	88	28	42	18	-
SMITHSONIAN INSTITUTION	8,606	8,606	-	-	-	651	-	651	-	-
TENNESSEE VALLEY AUTHORITY	1,949	1,949	-	-	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY	-	-	-	-	-	46	-	46	-	-
VETERANS ADMINISTRATION	54,844	15,560	35,984	3,300	-	-	-	-	-	-

TABLE C-22. FEDERAL OBLIGATIONS FOR RESEARCH IN LIFE AND ENVIRONMENTAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	LIFE SCIENCES					ENVIRONMENTAL SCIENCES				
	TOTAL	BIO-LOGICAL	CLINICAL MEDICAL	OTHER MEDICAL SCIENCES	LIFE SCIENCES NEC	TOTAL	ATMOS-PHERIC	GEO-LOGICAL	OCEAN-OGRAPHY	ENVIRON-MENTAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	1,945,097	850,875	874,284	193,169	26,769	701,988	340,301	216,329	112,148	33,210
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	189,267	185,697	3,330	240	-	5,265	2,013	3,252	-	-
AGRICULTURAL RESEARCH SERVICE..........	110,455	110,215	-	240	-	912	224	688	-	-
COOPERATIVE STATE RESEARCH SERVICE.....	50,609	47,279	3,330	-	-	428	428	-	-	-
FOREST SERVICE.........................	28,203	28,203	-	-	-	3,925	1,361	2,564	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	38,974	38,974	-	-	-	35,642	24,378	7,334	3,930	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	38,974	38,974	-	-	-	35,642	24,378	7,334	3,930	-
DEPARTMENT OF DEFENSE, TOTAL...........	99,801	31,884	39,999	27,818	100	133,415	47,038	27,321	42,756	16,300
DEPARTMENT OF THE ARMY.................	46,019	19,319	26,600	-	100	14,052	7,917	3,350	2,585	200
DEPARTMENT OF THE NAVY.................	19,045	5,821	13,224	-	-	48,295	7,411	1,632	38,591	661
DEPARTMENT OF THE AIR FORCE............	29,509	1,691	-	27,818	-	27,894	25,190	2,704	-	-
DEFENSE AGENCIES.......................	4,739	4,739	-	-	-	43,174	6,520	19,635	1,580	15,439
DEPARTMENTWIDE FUNDS...................	489	314	175	-	-	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	1,174,816	254,904	775,786	144,126	-	872	-	-	-	872
FOOD AND DRUG ADMINISTRATION...........	21,909	21,909	-	-	-	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	112,943	26,869	86,074	-	-	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	1,021,764	206,126	671,512	144,126	-	872	-	-	-	872
OFFICE OF CHILD DEVELOPMENT............	1,000	-	1,000	-	-	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	17,200	-	17,200	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	24,415	24,383	-	-	32	52,175	6,832	43,952	1,345	46
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
BUREAU OF LAND MANAGEMENT..............	735	735	-	-	-	-	-	-	-	-
BUREAU OF MINES........................	-	-	-	-	-	828	-	828	-	-
BUREAU OF RECLAMATION..................	7	2	-	-	5	6,700	6,700	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	21,158	21,158	-	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	-	-	-	-	-	41,789	-	40,614	1,175	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	140	-	-	140	-
OFFICE OF WATER RESOURCES RESEARCH.....	2,515	2,488	-	-	27	2,718	132	2,510	30	46
DEPARTMENT OF JUSTICE, TOTAL...........	1,399	1,399	-	-	-	-	-	-	-	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	1,399	1,399	-	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	19,219	12,192	7,027	-	-	200	-	200	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	19,219	12,192	7,027	-	-	200	-	200	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	4,805	1,649	156	500	2,500	19,788	3,000	100	14,913	1,775
FEDERAL AVIATION ADMINISTRATION........	1,805	1,649	156	-	-	3,000	3,000	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	500	-	-	500	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	2,500	-	-	-	2,500	-	-	-	-	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	675	-	-	-	675
UNITED STATES COAST GUARD..............	-	-	-	-	-	15,013	-	-	14,913	100
URBAN MASS TRANSPORTATION ADMIN........	-	-	-	-	-	1,100	-	100	-	1,000
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION...............	79,294	71,384	7,910	-	-	9,580	5,520	1,[illegible]0	2,260	-
ENVIRONMENTAL PROTECTION AGENCY........	27,890	17,140	539	10,211	-	6,914	1,091	29	3,077	2,717
NATIONAL AERONAUTICS & SPACE ADMIN.....	125,326	98,356	2,209	6,974	17,787	349,873	221,649	118,713	9,511	-
NATIONAL SCIENCE FOUNDATION............	87,528	81,178	-	-	6,350	87,424	28,750	12,839	34,335	11,500
OFFICE OF ECONOMIC OPPORTUNITY.........	900	-	900	-	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	330	201	129	-	-	96	30	45	21	-
SMITHSONIAN INSTITUTION................	13,928	13,928	-	-	-	700	-	700	-	-
TENNESSEE VALLEY AUTHORITY.............	2,051	2,051	-	-	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	-	-	-	-	-	44	-	44	-	-
VETERANS ADMINISTRATION................	55,154	15,555	36,299	3,300	-	-	-	-	-	-

TABLE C-23. FEDERAL OBLIGATIONS FOR RESEARCH IN ENGINEERING,

FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	AERO-NAUTICAL	ASTRO-NAUTICAL	CHEMICAL	CIVIL	ELEC-TRICAL	MECHANICAL	METALLURGY AND MATERIALS	ENGI-NEERING NEC
TOTAL, ALL AGENCIES	1,967,739	466,464	289,525	117,224	60,771	354,351	140,011	151,549	387,844
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL	28,909	-	-	4,200	3,312	87	1,454	-	19,856
AGRICULTURAL RESEARCH SERVICE	20,707	-	-	3,781	2,472	87	761	-	13,606
COOPERATIVE STATE RESEARCH SERVICE	2,092	-	-	-	-	-	-	-	2,092
FOREST SERVICE	6,110	-	-	419	840	-	693	-	4,158
DEPARTMENT OF COMMERCE, TOTAL	15,689	125	-	956	4,064	4,919	1,080	1,928	2,617
MARITIME ADMINISTRATION	3,268	-	-	-	2,729	71	-	-	468
NATIONAL BUREAU OF STANDARDS	9,456	125	-	-	1,335	3,579	340	1,928	2,149
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	2,965	-	-	956	-	1,269	740	-	-
DEPARTMENT OF DEFENSE, TOTAL	972,775	163,371	108,058	36,511	15,714	261,417	69,250	71,359	247,095
DEPARTMENT OF THE ARMY	129,057	16,797	10	18,203	8,865	38,997	14,199	15,360	16,626
DEPARTMENT OF THE NAVY	112,640	12,378	856	10,990	3,102	35,356	25,228	19,030	5,700
DEPARTMENT OF THE AIR FORCE	568,265	125,601	97,759	5,563	1,570	138,045	24,068	27,139	148,520
DEFENSE AGENCIES	161,760	8,595	9,433	1,755	1,617	48,920	5,571	9,830	76,039
DEPARTMENTWIDE FUNDS	1,053	-	-	-	560	99	184	-	210
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	22,667	-	-	-	-	148	-	31	22,488
HEALTH SERVICES & MENTAL HEALTH ADMIN.	87	-	-	-	-	87	-	-	-
NATIONAL INSTITUTES OF HEALTH	22,435	-	-	-	-	61	-	31	22,343
SOCIAL AND REHABILITATION SERVICE	145	-	-	-	-	-	-	-	145
DEPARTMENT OF HOUSING & URBAN DEVELOP.	7,097	-	-	-	6,387	213	213	284	-
DEPARTMENT OF THE INTERIOR, TOTAL	39,892	-	-	14,315	5,595	2,428	1,577	14,464	1,513
BONNEVILLE POWER ADMINISTRATION	448	-	-	-	-	448	-	-	-
BUREAU OF MINES	24,040	-	-	8,013	24	823	736	14,444	-
BUREAU OF RECLAMATION	2,294	-	-	-	2,108	186	-	-	-
GEOLOGICAL SURVEY	1,374	-	-	-	1,174	-	200	-	-
OFFICE OF COAL RESEARCH	2,341	-	-	1,000	-	891	440	-	10
OFFICE OF SALINE WATER	5,001	-	-	5,001	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH	4,394	-	-	301	2,289	80	201	20	1,503
DEPARTMENT OF JUSTICE, TOTAL	363	-	-	-	-	363	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN	363	-	-	-	-	363	-	-	-
DEPARTMENT OF STATE, TOTAL	1,392	-	-	-	1,190	-	202	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	1,392	-	-	-	1,190	-	202	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL	51,313	2,635	-	1,782	11,081	2,523	11,979	6,914	14,399
FEDERAL AVIATION ADMINISTRATION	7,331	1,915	-	-	180	-	-	-	5,236
FEDERAL HIGHWAY ADMINISTRATION	27,177	-	-	1,388	8,357	1,401	2,716	6,374	6,941
FEDERAL RAILROAD ADMINISTRATION	4,020	720	-	-	1,093	1,007	700	500	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.	8,293	-	-	-	-	-	8,293	-	-
OFFICE OF THE SECRETARY	1,902	-	-	-	-	-	-	-	1,902
UNITED STATES COAST GUARD	595	-	-	394	201	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN	1,995	-	-	-	1,250	115	270	40	320
DEPARTMENT OF THE TREASURY, TOTAL	16	-	-	-	-	-	-	16	-
BUREAU OF ENGRAVING AND PRINTING	16	-	-	-	-	-	-	16	-
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION	36,879	-	-	4,589	-	-	-	30,986	1,304
ENVIRONMENTAL PROTECTION AGENCY	19,718	-	219	6,747	7,870	197	4,685	-	-
FEDERAL COMMUNICATIONS COMMISSION	1,015	-	-	-	-	1,015	-	-	-
GENERAL SERVICES ADMINISTRATION	194	-	-	-	194	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.	736,359	299,772	181,207	42,145	159	74,331	44,233	22,458	72,054
NATIONAL SCIENCE FOUNDATION	25,927	520	-	4,640	3,116	5,983	5,299	3,070	3,299
OFFICE OF EMERGENCY PREPAREDNESS	531	-	-	-	-	531	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY	279	41	41	41	39	39	39	39	-
TENNESSEE VALLEY AUTHORITY	3,406	-	-	1,298	2,050	-	-	-	58
US ARMS CONTROL & DISARMAMENT AGENCY	2,811	-	-	-	-	-	-	-	2,811

TABLE C-24. FEDERAL OBLIGATIONS FOR RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	AERO-NAUTICAL	ASTRO-NAUTICAL	CHEMICAL	CIVIL	ELEC-TRICAL	MECHANICAL	METALLURGY AND MATERIALS	ENGI-NEERING NEC
TOTAL, ALL AGENCIES....................	2,013,906	473,635	287,850	113,299	80,425	356,340	145,327	154,734	402,296
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	31,137	-	-	4,374	3,525	56	1,576	-	21,606
AGRICULTURAL RESEARCH SERVICE..........	22,246	-	-	3,922	2,622	56	828	-	14,818
COOPERATIVE STATE RESEARCH SERVICE.....	2,295	-	-	-	-	-	-	-	2,295
FOREST SERVICE.........................	6,596	-	-	452	903	-	748	-	4,493
DEPARTMENT OF COMMERCE, TOTAL..........	30,817	130	-	1,275	12,599	9,031	2,924	2,013	2,845
MARITIME ADMINISTRATION................	15,905	-	-	-	11,175	2,544	1,584	-	602
NATIONAL BUREAU OF STANDARDS...........	9,901	130	-	-	1,424	3,736	355	2,013	2,243
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	3,951	-	-	1,275	-	1,691	985	-	-
OFFICE OF TELECOMMUNICATIONS...........	1,060	-	-	-	-	1,060	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	922,162	142,247	95,448	33,931	17,928	256,381	63,572	73,916	238,739
DEPARTMENT OF THE ARMY.................	118,351	17,751	-	13,027	8,053	34,021	12,506	14,923	18,070
DEPARTMENT OF THE NAVY.................	111,774	11,910	1,233	12,417	3,975	35,417	21,867	19,973	4,982
DEPARTMENT OF THE AIR FORCE............	546,077	105,105	90,016	6,577	3,520	145,414	26,195	28,053	141,197
DEFENSE AGENCIES.......................	145,071	7,481	4,199	1,910	1,866	41,470	2,898	10,967	74,280
DEPARTMENTWIDE FUNDS...................	889	-	-	-	514	59	106	-	210
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	27,294	-	-	-	-	138	-	36	27,120
HEALTH SERVICES & MENTAL HEALTH ADMIN..	66	-	-	-	-	66	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	27,078	-	-	-	-	72	-	36	26,970
SOCIAL AND REHABILITATION SERVICE......	150	-	-	-	-	-	-	-	150
DEPARTMENT OF HOUSING & URBAN DEVELOP..	11,862	-	-	-	10,676	356	356	474	-
DEPARTMENT OF THE INTERIOR, TOTAL......	45,405	-	-	13,045	6,059	3,326	2,547	17,796	2,632
BONNEVILLE POWER ADMINISTRATION........	381	-	-	-	-	381	-	-	-
BUREAU OF MINES........................	27,411	-	-	8,100	24	1,334	1,126	16,827	-
BUREAU OF RECLAMATION..................	2,406	-	-	-	2,215	191	-	-	-
GEOLOGICAL SURVEY......................	1,391	-	-	-	1,191	-	200	-	-
OFFICE OF COAL RESEARCH................	4,809	-	-	1,209	-	750	1,000	950	900
OFFICE OF SALINE WATER.................	3,400	-	-	3,400	-	-	-	-	-
OFFICE OF THE SECRETARY................	583	-	-	-	-	583	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	5,024	-	-	336	2,629	87	221	19	1,732
DEPARTMENT OF JUSTICE, TOTAL...........	363	-	-	-	-	363	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	363	-	-	-	-	363	-	-	-
DEPARTMENT OF STATE, TOTAL.............	1,210	-	-	-	1,021	-	189	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	1,210	-	-	-	1,021	-	189	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	75,640	2,415	-	1,444	13,242	2,113	15,075	6,324	35,027
FEDERAL AVIATION ADMINISTRATION........	19,640	2,415	-	-	250	-	-	-	16,975
FEDERAL HIGHWAY ADMINISTRATION.........	26,012	-	-	1,324	7,982	1,338	2,601	6,134	6,633
FEDERAL RAILROAD ADMINISTRATION........	5,986	-	-	-	2,601	710	2,295	150	230
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	8,940	-	-	-	-	-	8,940	-	-

MARITIME ADMINISTRATION..................	15,905	-	-	-	11,175	2,544	1,584	-	602
NATIONAL BUREAU OF STANDARDS............	9,901	130	-	-	1,424	3,736	355	2,013	2,243
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	3,951	-	-	1,275	-	1,691	985	-	-
OFFICE OF TELECOMMUNICATIONS...........	1,060	-	-	-	-	1,060	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	922,162	142,247	95,448	33,931	17,928	256,381	63,572	73,916	238,739
DEPARTMENT OF THE ARMY..................	118,351	17,751	-	13,027	8,053	34,021	12,506	14,923	18,070
DEPARTMENT OF THE NAVY..................	111,774	11,910	1,233	12,417	3,975	35,417	21,867	19,973	4,982
DEPARTMENT OF THE AIR FORCE............	546,077	105,105	90,016	6,577	3,520	145,414	26,195	28,053	141,197
DEFENSE AGENCIES........................	145,071	7,481	4,199	1,910	1,866	41,470	2,898	10,967	74,280
DEPARTMENTWIDE FUNDS....................	889	-	-	-	514	59	106	-	210
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	27,294	-	-	-	-	138	-	36	27,120
HEALTH SERVICES & MENTAL HEALTH ADMIN..	66	-	-	-	-	66	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	27,078	-	-	-	-	72	-	36	26,970
SOCIAL AND REHABILITATION SERVICE......	150	-	-	-	-	-	-	-	150
DEPARTMENT OF HOUSING & URBAN DEVELOP..	11,862	-	-	-	10,676	356	356	474	-
DEPARTMENT OF THE INTERIOR, TOTAL......	45,405	-	-	13,045	6,059	3,326	2,547	17,796	2,632
BONNEVILLE POWER ADMINISTRATION........	381	-	-	-	-	381	-	-	-
BUREAU OF MINES.........................	27,411	-	-	8,100	24	1,334	1,126	16,827	-
BUREAU OF RECLAMATION...................	2,406	-	-	-	2,215	191	-	-	-
GEOLOGICAL SURVEY.......................	1,391	-	-	-	1,191	-	200	-	-
OFFICE OF COAL RESEARCH.................	4,809	-	-	1,209	-	750	1,000	950	900
OFFICE OF SALINE WATER..................	3,400	-	-	3,400	-	-	-	-	-
OFFICE OF THE SECRETARY.................	583	-	-	-	-	583	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	5,024	-	-	336	2,629	87	221	19	1,732
DEPARTMENT OF JUSTICE, TOTAL...........	363	-	-	-	-	363	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	363	-	-	-	-	363	-	-	-
DEPARTMENT OF STATE, TOTAL.............	1,210	-	-	-	1,021	-	189	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	1,210	-	-	-	1,021	-	189	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	75,640	2,415	-	1,444	13,242	2,113	15,075	6,324	35,027
FEDERAL AVIATION ADMINISTRATION........	19,640	2,415	-	-	250	-	-	-	16,975
FEDERAL HIGHWAY ADMINISTRATION.........	26,012	-	-	1,324	7,982	1,338	2,601	6,134	6,633
FEDERAL RAILROAD ADMINISTRATION........	5,986	-	-	-	2,601	710	2,295	150	230
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	8,940	-	-	-	-	-	8,940	-	-
OFFICE OF THE SECRETARY.................	10,000	-	-	-	-	-	-	-	10,000
UNITED STATES COAST GUARD..............	1,656	-	-	120	1,536	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	3,406	-	-	-	873	65	1,239	40	1,189
DEPARTMENT OF THE TREASURY, TOTAL......	18	-	-	-	-	-	-	18	-
BUREAU OF ENGRAVING AND PRINTING.......	18	-	-	-	-	-	-	18	-
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION................	36,700	-	-	4,665	-	-	-	30,950	1,085
ENVIRONMENTAL PROTECTION AGENCY........	23,781	-	196	8,332	9,978	166	5,109	-	-
FEDERAL COMMUNICATIONS COMMISSION......	638	-	-	-	-	638	-	-	-
GENERAL SERVICES ADMINISTRATION........	63	-	-	-	63	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	766,759	327,130	192,163	39,892	-	73,766	48,241	21,178	64,389
NATIONAL SCIENCE FOUNDATION............	33,290	1,670	-	4,940	2,940	9,804	5,198	1,987	6,751
OFFICE OF EMERGENCY PREPAREDNESS.......	498	-	-	-	-	-	498	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	297	43	43	43	42	42	42	42	-
TENNESSEE VALLEY AUTHORITY.............	4,125	-	-	1,358	2,352	-	-	-	415
US ARMS CONTROL & DISARMAMENT AGENCY...	1,317	-	-	-	-	-	-	-	1,317
UNITED STATES INFORMATION AGENCY.......	160	-	-	-	-	160	-	-	-
VETERANS ADMINISTRATION.................	370	-	-	-	-	-	-	-	370

TABLE C-25. FEDERAL OBLIGATIONS FOR RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	AERO-NAUTICAL	ASTRO-NAUTICAL	CHEMICAL	CIVIL	ELEC-TRICAL	MECHANICAL	METALLURGY AND MATERIALS	ENGI-NEERING NEC
TOTAL, ALL AGENCIES	2,197,655	474,598	328,946	122,850	106,178	393,633	143,849	159,750	467,851
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL	31,420	-	-	4,317	3,527	56	1,570	-	21,950
AGRICULTURAL RESEARCH SERVICE	22,287	-	-	3,864	2,619	56	821	-	14,927
COOPERATIVE STATE RESEARCH SERVICE	2,522	-	-	-	-	-	-	-	2,522
FOREST SERVICE	6,611	-	-	453	908	-	749	-	4,501
DEPARTMENT OF COMMERCE, TOTAL	32,589	130	-	1,543	14,269	9,120	1,548	2,012	3,967
MARITIME ADMINISTRATION	13,895	-	-	-	12,320	-	-	-	1,575
NATIONAL BUREAU OF STANDARDS	10,571	130	-	-	1,949	3,733	355	2,012	2,392
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	4,783	-	-	1,543	-	2,047	1,193	-	-
OFFICE OF TELECOMMUNICATIONS	3,340	-	-	-	-	3,340	-	-	-
DEPARTMENT OF DEFENSE, TOTAL	1,021,720	147,054	108,276	40,174	21,898	298,202	60,241	82,124	263,751
DEPARTMENT OF THE ARMY	130,952	19,555	90	16,360	8,483	41,050	13,174	15,661	16,579
DEPARTMENT OF THE NAVY	119,847	12,051	1,006	13,361	7,820	32,951	22,370	24,848	5,440
DEPARTMENT OF THE AIR FORCE	594,354	112,448	102,745	6,653	2,820	177,773	20,836	29,215	141,864
DEFENSE AGENCIES	175,642	3,000	4,435	3,800	2,240	46,367	3,750	12,400	99,650
DEPARTMENTWIDE FUNDS	925	-	-	-	535	61	111	-	218
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	31,049	-	-	-	-	126	-	41	30,882
HEALTH SERVICES & MENTAL HEALTH ADMIN.	44	-	-	-	-	44	-	-	-
NATIONAL INSTITUTES OF HEALTH	30,905	-	-	-	-	82	-	41	30,782
SOCIAL AND REHABILITATION SERVICE	100	-	-	-	-	-	-	-	100
DEPARTMENT OF HOUSING & URBAN DEVELOP.	12,740	-	-	-	11,466	382	382	510	-
DEPARTMENT OF THE INTERIOR, TOTAL	46,942	-	3,775	10,828	7,987	3,170	1,845	16,647	2,690
BONNEVILLE POWER ADMINISTRATION	431	-	-	-	-	431	-	-	-
BUREAU OF MINES	27,951	-	-	9,089	1,441	789	1,335	15,297	-
BUREAU OF RECLAMATION	2,736	-	-	-	2,546	190	-	-	-
GEOLOGICAL SURVEY	1,460	-	-	-	1,250	-	210	-	-
OFFICE OF COAL RESEARCH	4,059	-	-	1,259	-	750	-	1,150	900
OFFICE OF SALINE WATER	3,775	-	3,775	-	-	-	-	-	-
OFFICE OF THE SECRETARY	1,053	-	-	75	-	818	-	160	-
OFFICE OF WATER RESOURCES RESEARCH	5,477	-	-	405	2,750	192	300	40	1,790
DEPARTMENT OF JUSTICE, TOTAL	1,990	-	-	-	-	1,990	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.	1,990	-	-	-	-	1,990	-	-	-
DEPARTMENT OF STATE, TOTAL	1,705	-	-	-	1,455	-	250	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	1,705	-	-	-	1,455	-	250	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL	133,579	3,500	200	1,719	17,404	2,506	20,964	7,341	79,945
FEDERAL AVIATION ADMINISTRATION	54,586	3,500	-	-	300	-	-	-	50,786
FEDERAL HIGHWAY ADMINISTRATION	30,448	-	-	1,551	9,342	1,566	3,044	7,181	7,764
FEDERAL RAILROAD ADMINISTRATION	5,765	-	-	-	2,420	900	2,000	120	325
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.	14,650	-	-	-	-	-	14,650	-	-
OFFICE OF THE SECRETARY	20,750	-	-	-	-	-	-	-	20,750
UNITED STATES COAST GUARD	4,730	-	200	168	4,362	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN.	2,650	-	-	-	980	40	1,270	40	320
DEPARTMENT OF THE TREASURY, TOTAL	18	-	-	-	-	-	-	18	-

NATIONAL BUREAU OF STANDARDS............	10,571	130	-	-	1,949	[illegible]	[illegible]	[illegible]	[illegible]
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	4,783	-	-	1,543	-	2,047	1,193	-	-
OFFICE OF TELECOMMUNICATIONS............	3,340	-	-	-	-	3,340	-	-	-
DEPARTMENT OF DEFENSE, TOTAL............	1,021,720	147,054	108,276	40,174	21,898	298,202	60,241	82,124	263,751
DEPARTMENT OF THE ARMY..................	130,952	19,555	90	16,360	8,483	41,050	13,174	15,661	16,579
DEPARTMENT OF THE NAVY..................	119,847	12,051	1,006	13,361	7,820	32,951	22,370	24,848	5,440
DEPARTMENT OF THE AIR FORCE.............	594,354	112,448	102,745	6,653	2,820	177,773	20,836	29,215	141,864
DEFENSE AGENCIES........................	175,642	3,000	4,435	3,800	2,240	46,367	3,750	12,400	99,650
DEPARTMENTWIDE FUNDS....................	925	-	-	-	535	61	111	-	218
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	31,049	-	-	-	-	126	-	41	30,882
HEALTH SERVICES & MENTAL HEALTH ADMIN..	44	-	-	-	-	44	-	-	-
NATIONAL INSTITUTES OF HEALTH...........	30,905	-	-	-	-	82	-	41	30,782
SOCIAL AND REHABILITATION SERVICE......	100	-	-	-	-	-	-	-	100
DEPARTMENT OF HOUSING & URBAN DEVELOP..	12,740	-	-	-	11,466	382	382	510	-
DEPARTMENT OF THE INTERIOR, TOTAL......	46,942	-	3,775	10,828	7,987	3,170	1,845	16,647	2,690
BONNEVILLE POWER ADMINISTRATION........	431	-	-	-	-	431	-	-	-
BUREAU OF MINES.........................	27,951	-	-	9,089	1,441	789	1,335	15,297	-
BUREAU OF RECLAMATION...................	2,736	-	-	-	2,546	190	-	-	-
GEOLOGICAL SURVEY.......................	1,460	-	-	-	1,250	-	210	-	-
OFFICE OF COAL RESEARCH.................	4,059	-	-	1,259	-	750	-	1,150	900
OFFICE OF SALINE WATER..................	3,775	-	3,775	-	-	-	-	-	-
OFFICE OF THE SECRETARY.................	1,053	-	-	75	-	818	-	160	-
OFFICE OF WATER RESOURCES RESEARCH.....	5,477	-	-	405	2,750	192	300	40	1,790
DEPARTMENT OF JUSTICE, TOTAL............	1,990	-	-	-	-	1,990	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	1,990	-	-	-	-	1,990	-	-	-
DEPARTMENT OF STATE, TOTAL.............	1,705	-	-	-	1,455	-	250	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	1,705	-	-	-	1,455	-	250	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	133,579	3,500	200	1,719	17,404	2,506	20,964	7,341	79,945
FEDERAL AVIATION ADMINISTRATION........	54,586	3,500	-	-	300	-	-	-	50,786
FEDERAL HIGHWAY ADMINISTRATION.........	30,448	-	-	1,551	9,342	1,566	3,044	7,181	7,764
FEDERAL RAILROAD ADMINISTRATION........	5,765	-	-	-	2,420	900	2,000	120	325
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	14,650	-	-	-	-	-	14,650	-	-
OFFICE OF THE SECRETARY.................	20,750	-	-	-	-	-	-	-	20,750
UNITED STATES COAST GUARD..............	4,730	-	200	168	4,362	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	2,650	-	-	-	980	40	1,270	40	320
DEPARTMENT OF THE TREASURY, TOTAL......	18	-	-	-	-	-	-	18	-
BUREAU OF ENGRAVING AND PRINTING.......	18	-	-	-	-	-	-	18	-
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	35,852	-	-	4,627	-	-	-	30,320	905
ENVIRONMENTAL PROTECTION AGENCY........	32,041	-	193	11,820	12,244	161	7,623	-	-
FEDERAL COMMUNICATIONS COMMISSION......	869	-	-	-	-	869	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	751,550	321,276	216,454	37,656	-	68,646	43,041	17,633	46,844
NATIONAL SCIENCE FOUNDATION............	56,665	2,590	-	8,750	13,690	8,210	6,340	3,060	14,025
OFFICE OF SCIENCE AND TECHNOLOGY.......	324	48	48	48	46	45	45	44	-
TENNESSEE VALLEY AUTHORITY.............	4,685	-	-	1,368	2,192	-	-	-	1,125
US ARMS CONTROL & DISARMAMENT AGENCY...	1,397	-	-	-	-	-	-	-	1,397
UNITED STATES INFORMATION AGENCY.......	150	-	-	-	-	150	-	-	-
VETERANS ADMINISTRATION................	370	-	-	-	-	-	-	-	370

TABLE C-26. FEDERAL OBLIGATIONS FOR RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	ANTHRO-POLOGY	ECONOMICS	HISTORY	LIN-GUISTICS	POLITICAL SCIENCE	SOCIOLOGY	SOCIAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	215,852	8,763	84,332	4,542	1,989	7,417	38,487	70,322
DEPARTMENTS								
DEPARTMENT OF AGRICULTURE, TOTAL.......	33,663	-	31,857	149	-	43	1,364	250
AGRICULTURAL RESEARCH SERVICE..........	1,150	-	1,043	-	-	-	49	58
COOPERATIVE STATE RESEARCH SERVICE.....	13,574	-	12,855	-	-	-	719	-
ECONOMIC RESEARCH SERVICE..............	14,904	-	14,198	149	-	43	322	192
FARMER COOPERATIVE SERVICE.............	884	-	884	-	-	-	-	-
FOREST SERVICE.........................	2,884	-	2,610	-	-	-	274	-
STATISTICAL REPORTING SERVICE..........	267	-	267	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	10,826	-	10,430	-	-	-	396	-
BUREAU OF THE CENSUS...................	832	-	436	-	-	-	396	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	3,809	-	3,809	-	-	-	-	-
MARITIME ADMINISTRATION................	1,521	-	1,521	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	1,159	-	1,159	-	-	-	-	-
OFFICE OF BUSINESS ECONOMICS...........	3,505	-	3,505	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	4,693	-	646	-	111	2,291	1,153	492
DEPARTMENT OF THE ARMY.................	2,767	-	425	-	-	1,165	1,117	60
DEPARTMENT OF THE AIR FORCE............	200	-	-	-	-	200	-	-
DEFENSE AGENCIES.......................	1,400	-	-	-	111	891	-	398
DEPARTMENTWIDE FUNDS...................	326	-	221	-	-	35	36	34
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	84,368	2,365	5,216	-	582	511	19,475	56,219
HEALTH SERVICES & MENTAL HEALTH ADMIN..	25,526	2,244	5,098	-	-	511	17,212	461
NATIONAL INSTITUTES OF HEALTH..........	1,085	121	118	-	327	-	496	23
OFFICE OF CHILD DEVELOPMENT............	500	-	-	-	-	-	-	500
OFFICE OF EDUCATION....................	26,241	-	-	-	255	-	-	25,986
SOCIAL AND REHABILITATION SERVICE......	18,647	-	-	-	-	-	1,767	16,880
SOCIAL SECURITY ADMINISTRATION.........	12,369	-	-	-	-	-	-	12,369
DEPARTMENT OF THE INTERIOR, TOTAL......	1,494	-	951	10	-	186	201	146
BUREAU OF LAND MANAGEMENT..............	60	-	60	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION...........	92	-	62	-	-	5	20	5
BUREAU OF RECLAMATION..................	73	-	73	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	1,269	-	756	10	-	181	181	141
DEPARTMENT OF JUSTICE, TOTAL...........	2,536	-	-	-	-	95	1,087	1,354
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	399	-	-	-	-	-	399	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	2,137	-	-	-	-	95	688	1,354
DEPARTMENT OF LABOR, TOTAL.............	11,286	-	11,286	-	-	-	-	-
BUREAU OF LABOR STATISTICS.............	2,566	-	2,566	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	290	-	290	-	-	-	-	-
MANPOWER ADMINISTRATION................	6,214	-	6,214	-	-	-	-	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,216	-	2,216	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	2,939	-	1,532	-	-	-	358	1,049

FOREST SERVICE..........................	2,884	-	2,610	-	-	-	274	-
STATISTICAL REPORTING SERVICE...........	267	-	267	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	10,826	-	10,430	-	-	-	396	-
BUREAU OF THE CENSUS....................	832	-	436	-	-	-	396	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	3,809	-	3,809	-	-	-	-	-
MARITIME ADMINISTRATION.................	1,521	-	1,521	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	1,159	-	1,159	-	-	-	-	-
OFFICE OF BUSINESS ECONOMICS...........	3,505	-	3,505	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	4,693	-	646	-	111	2,291	1,153	492
DEPARTMENT OF THE ARMY..................	2,767	-	425	-	-	1,165	1,117	60
DEPARTMENT OF THE AIR FORCE.............	200	-	-	-	-	200	-	-
DEFENSE AGENCIES........................	1,400	-	-	-	111	891	-	398
DEPARTMENTWIDE FUNDS....................	326	-	221	-	-	35	36	34
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	84,368	2,365	5,216	-	582	511	19,475	56,219
HEALTH SERVICES & MENTAL HEALTH ADMIN..	25,526	2,244	5,098	-	-	511	17,212	461
NATIONAL INSTITUTES OF HEALTH..........	1,085	121	118	-	327	-	496	23
OFFICE OF CHILD DEVELOPMENT............	500	-	-	-	-	-	-	500
OFFICE OF EDUCATION.....................	26,241	-	-	-	255	-	-	25,986
SOCIAL AND REHABILITATION SERVICE......	18,647	-	-	-	-	-	1,767	16,880
SOCIAL SECURITY ADMINISTRATION.........	12,369	-	-	-	-	-	-	12,369
DEPARTMENT OF THE INTERIOR, TOTAL......	1,494	-	951	10	-	186	201	146
BUREAU OF LAND MANAGEMENT..............	60	-	60	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION...........	92	-	62	-	-	5	20	5
BUREAU OF RECLAMATION...................	73	-	73	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	1,269	-	756	10	-	181	181	141
DEPARTMENT OF JUSTICE, TOTAL...........	2,536	-	-	-	-	95	1,087	1,354
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	399	-	-	-	-	-	399	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	2,137	-	-	-	-	95	688	1,354
DEPARTMENT OF LABOR, TOTAL.............	11,286	-	11,286	-	-	-	-	-
BUREAU OF LABOR STATISTICS.............	2,566	-	2,566	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	290	-	290	-	-	-	-	-
MANPOWER ADMINISTRATION................	6,214	-	6,214	-	-	-	-	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,216	-	2,216	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	2,939	-	1,532	-	-	-	358	1,049
DEPARTMENTAL FUNDS......................	125	-	-	-	-	-	-	125
AGENCY FOR INTERNATIONAL DEVELOPMENT...	2,814	-	1,532	-	-	-	358	924
DEPARTMENT OF TRANSPORTATION, TOTAL....	11,549	-	8,158	-	-	1,308	1,102	981
FEDERAL HIGHWAY ADMINISTRATION.........	1,431	-	569	-	-	-	862	-
FEDERAL RAILROAD ADMINISTRATION........	323	-	323	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,108	-	-	-	-	1,108	-	-
OFFICE OF THE SECRETARY................	6,805	-	6,461	-	-	-	-	344
URBAN MASS TRANSPORTATION ADMIN........	1,882	-	805	-	-	200	240	637
OTHER AGENCIES								
ADVISORY COMM ON INTERGOVT RELATIONS...	553	-	276	-	-	277	-	-
CIVIL AERONAUTICS BOARD................	263	-	263	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	523	-	379	-	-	-	63	81
FEDERAL HOME LOAN BANK BOARD...........	390	-	390	-	-	-	-	-
FEDERAL TRADE COMMISSION...............	388	-	388	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	1,230	-	61	-	-	-	-	1,169
NATIONAL SCIENCE FOUNDATION............	19,582	3,227	5,133	924	1,296	2,505	1,711	4,786
OFFICE OF ECONOMIC OPPORTUNITY.........	21,800	-	6,700	-	-	-	11,400	3,700
OFFICE OF SCIENCE AND TECHNOLOGY.......	18	3	3	3	-	5	2	2
SMALL BUSINESS ADMINISTRATION..........	101	-	101	-	-	-	-	-
SMITHSONIAN INSTITUTION................	,727	3,168	-	3,456	-	103	-	-
TENNESSEE VALLEY AUTHORITY.............	353	-	353	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	395	-	209	-	-	93	-	93
VETERANS ADMINISTRATION................	175	-	-	-	-	-	175	-

TABLE C-27. FEDERAL OBLIGATIONS FOR RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	ANTHRO-POLOGY	ECONOMICS	HISTORY	LIN-GUISTICS	POLITICAL SCIENCE	SOCIOLOGY	SOCIAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	272,994	10,412	89,344	5,006	2,012	6,070	50,009	110,141
DEPARTMENTS								
DEPARTMENT OF AGRICULTURE, TOTAL.......	36,066	-	34,133	157	-	45	1,473	258
AGRICULTURAL RESEARCH SERVICE..........	1,145	-	1,040	-	-	-	48	57
COOPERATIVE STATE RESEARCH SERVICE.....	14,896	-	14,107	-	-	-	789	-
ECONOMIC RESEARCH SERVICE..............	15,688	-	14,945	157	-	45	340	201
FARMER COOPERATIVE SERVICE.............	945	-	945	-	-	-	-	-
FOREST SERVICE.........................	3,119	-	2,823	-	-	-	296	-
STATISTICAL REPORTING SERVICE..........	273	-	273	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	10,060	-	9,547	-	-	-	513	-
BUREAU OF THE CENSUS...................	1,074	-	561	-	-	-	513	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	1,844	-	1,844	-	-	-	-	-
MARITIME ADMINISTRATION................	1,588	-	1,588	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	1,550	-	1,550	-	-	-	-	-
OFFICE OF BUSINESS ECONOMICS...........	4,004	-	4,004	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	4,552	140	728	-	366	1,415	1,318	585
DEPARTMENT OF THE ARMY.................	2,443	140	590	-	-	652	1,016	45
DEPARTMENT OF THE AIR FORCE............	300	-	-	-	-	-	-	300
DEFENSE AGENCIES.......................	1,359	-	-	-	366	753	-	240
DEPARTMENTWIDE FUNDS...................	450	-	138	-	-	10	302	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	124,484	3,004	7,026	-	395	692	23,582	89,785
HEALTH SERVICES & MENTAL HEALTH ADMIN..	33,479	2,860	6,898	-	-	692	20,600	2,429
NATIONAL INSTITUTES OF HEALTH..........	1,301	144	128	-	395	-	607	27
OFFICE OF CHILD DEVELOPMENT............	1,000	-	-	-	-	-	500	500
OFFICE OF EDUCATION....................	59,052	-	-	-	-	-	-	59,052
SOCIAL AND REHABILITATION SERVICE......	16,145	-	-	-	-	-	1,875	14,270
SOCIAL SECURITY ADMINISTRATION.........	13,507	-	-	-	-	-	-	13,507
DEPARTMENT OF THE INTERIOR, TOTAL......	1,719	-	1,061	15	-	230	240	173
BUREAU OF LAND MANAGEMENT..............	57	-	57	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION...........	133	-	68	5	-	20	30	10
BUREAU OF RECLAMATION..................	65	-	65	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	1,464	-	871	10	-	210	210	163
DEPARTMENT OF JUSTICE, TOTAL...........	2,864	-	-	-	-	80	1,427	1,357
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	727	-	-	-	-	-	727	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	2,137	-	-	-	-	80	700	1,357
DEPARTMENT OF LABOR, TOTAL.............	12,495	-	12,495	-	-	-	-	-
BUREAU OF LABOR STATISTICS.............	2,615	-	2,615	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	720	-	720	-	-	-	-	-
MANPOWER ADMINISTRATION................	6,610	-	6,610	-	-	-	-	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,550	-	2,550	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	5,255	-	1,812	-	-	153	1,663	1,627
DEPARTMENTAL FUNDS.....................	350	-	-	-	-	-	-	350
AGENCY FOR INTERNATIONAL DEVELOPMENT...	4,905	-	1,812	-	-	153	1,663	1,277
DEPARTMENT OF TRANSPORTATION, TOTAL....	11,791	-	8,619	-	-	705	1,072	1,395
FEDERAL HIGHWAY ADMINISTRATION.........	1,456	-	582	-	-	-	874	-
FEDERAL RAILROAD ADMINISTRATION........	3,335	-	2,905	-	-	430	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	75	-	-	-	-	75	-	-
OFFICE OF THE SECRETARY................	4,900	-	4,400	-	-	-	-	500

MARITIME ADMINISTRATION								
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	1,550	-	1,550	-	-	-	-	-
OFFICE OF BUSINESS ECONOMICS	4,004	-	4,004	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL	4,552	140	728	-	366	1,415	1,318	585
DEPARTMENT OF THE ARMY	2,443	140	590	-	-	652	1,016	45
DEPARTMENT OF THE AIR FORCE	300	-	-	-	-	-	-	300
DEFENSE AGENCIES	1,359	-	-	-	366	753	-	240
DEPARTMENTWIDE FUNDS	450	-	138	-	-	10	302	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	124,484	3,004	7,026	-	395	692	23,582	89,785
HEALTH SERVICES & MENTAL HEALTH ADMIN.	33,479	2,860	6,898	-	-	692	20,600	2,429
NATIONAL INSTITUTES OF HEALTH	1,301	144	128	-	395	-	607	27
OFFICE OF CHILD DEVELOPMENT	1,000	-	-	-	-	-	500	500
OFFICE OF EDUCATION	59,052	-	-	-	-	-	-	59,052
SOCIAL AND REHABILITATION SERVICE	16,145	-	-	-	-	-	1,875	14,270
SOCIAL SECURITY ADMINISTRATION	13,507	-	-	-	-	-	-	13,507
DEPARTMENT OF THE INTERIOR, TOTAL	1,719	-	1,061	15	-	230	240	173
BUREAU OF LAND MANAGEMENT	57	-	57	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION	133	-	68	5	-	20	30	10
BUREAU OF RECLAMATION	65	-	65	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH	1,464	-	871	10	-	210	210	163
DEPARTMENT OF JUSTICE, TOTAL	2,864	-	-	-	-	80	1,427	1,357
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	727	-	-	-	-	-	727	-
LAW ENFORCEMENT ASSISTANCE ADMIN.	2,137	-	-	-	-	80	700	1,357
DEPARTMENT OF LABOR, TOTAL	12,495	-	12,495	-	-	-	-	-
BUREAU OF LABOR STATISTICS	2,615	-	2,615	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN.	720	-	720	-	-	-	-	-
MANPOWER ADMINISTRATION	6,610	-	6,610	-	-	-	-	-
WORKPLACE STANDARDS ADMINISTRATION	2,550	-	2,550	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL	5,255	-	1,812	-	-	153	1,663	1,627
DEPARTMENTAL FUNDS	350	-	-	-	-	-	-	350
AGENCY FOR INTERNATIONAL DEVELOPMENT	4,905	-	1,812	-	-	153	1,663	1,277
DEPARTMENT OF TRANSPORTATION, TOTAL	11,791	-	8,619	-	-	705	1,072	1,395
FEDERAL HIGHWAY ADMINISTRATION	1,456	-	582	-	-	-	874	-
FEDERAL RAILROAD ADMINISTRATION	3,335	-	2,905	-	-	430	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.	75	-	-	-	-	75	-	-
OFFICE OF THE SECRETARY	4,900	-	4,400	-	-	-	-	500
URBAN MASS TRANSPORTATION ADMIN.	2,025	-	732	-	-	200	198	895
OTHER AGENCIES								
ADVISORY COMM ON INTERGOVT RELATIONS	477	-	215	-	-	262	-	-
CIVIL AERONAUTICS BOARD	270	-	270	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY	666	-	498	-	-	-	53	115
FEDERAL HOME LOAN BANK BOARD	388	-	388	-	-	-	-	-
FEDERAL TRADE COMMISSION	467	-	467	-	-	-	-	-
NATIONAL SCIENCE FOUNDATION	25,444	3,666	5,803	900	1,251	2,392	2,231	9,201
OFFICE OF ECONOMIC OPPORTUNITY	27,250	-	5,500	-	-	-	16,250	5,500
OFFICE OF SCIENCE AND TECHNOLOGY	19	3	3	4	-	5	2	2
SMITHSONIAN INSTITUTION	7,529	3,599	-	3,930	-	-	-	-
TENNESSEE VALLEY AUTHORITY	428	-	428	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY	585	-	351	-	-	91	-	143
VETERANS ADMINISTRATION	185	-	-	-	-	-	185	-

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TABLE C-28. FEDERAL OBLIGATIONS FOR RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	ANTHROPOLOGY	ECONOMICS	HISTORY	LINGUISTICS	POLITICAL SCIENCE	SOCIOLOGY	SOCIAL SCIENCES NEC
TOTAL, ALL AGENCIES	311,018	15,128	98,706	5,181	2,636	7,327	71,840	110,200
DEPARTMENTS								
DEPARTMENT OF AGRICULTURE, TOTAL	37,273	-	35,274	155	-	45	1,543	256
AGRICULTURAL RESEARCH SERVICE	1,146	-	1,041	-	-	-	48	57
COOPERATIVE STATE RESEARCH SERVICE	16,363	-	15,497	-	-	-	866	-
ECONOMIC RESEARCH SERVICE	15,428	-	14,696	155	-	45	333	199
FARMER COOPERATIVE SERVICE	943	-	943	-	-	-	-	-
FOREST SERVICE	3,120	-	2,824	-	-	-	296	-
STATISTICAL REPORTING SERVICE	273	-	273	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL	9,465	-	9,016	-	-	-	449	-
BUREAU OF THE CENSUS	944	-	495	-	-	-	449	-
ECONOMIC DEVELOPMENT ADMINISTRATION	1,591	-	1,591	-	-	-	-	-
MARITIME ADMINISTRATION	550	-	550	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	1,872	-	1,872	-	-	-	-	-
OFFICE OF BUSINESS ECONOMICS	4,508	-	4,508	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL	8,110	25	868	-	420	1,600	4,544	653
DEPARTMENT OF THE ARMY	6,230	25	725	-	100	1,150	4,230	-
DEPARTMENT OF THE AIR FORCE	303	-	-	-	-	-	-	303
DEFENSE AGENCIES	1,110	-	-	-	320	440	-	350
DEPARTMENTWIDE FUNDS	467	-	143	-	-	10	314	-
DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL	116,866	2,819	8,000	-	716	738	24,339	80,254
HEALTH SERVICES & MENTAL HEALTH ADMIN.	33,517	2,655	7,360	-	-	738	21,312	1,452
NATIONAL INSTITUTES OF HEALTH	1,478	164	140	-	451	-	692	31
OFFICE OF CHILD DEVELOPMENT	2,000	-	500	-	-	-	500	1,000
OFFICE OF EDUCATION	53,375	-	-	-	265	-	-	53,110
SOCIAL AND REHABILITATION SERVICE	12,210	-	-	-	-	-	1,835	10,375
SOCIAL SECURITY ADMINISTRATION	14,286	-	-	-	-	-	-	14,286
DEPARTMENT OF THE INTERIOR, TOTAL	1,810	-	1,093	23	-	260	265	169
BUREAU OF LAND MANAGEMENT	58	-	58	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION	76	-	45	3	-	5	20	3
BUREAU OF RECLAMATION	80	-	80	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH	1,596	-	910	20	-	255	245	166
DEPARTMENT OF JUSTICE, TOTAL	5,146	-	-	-	-	240	2,206	2,700
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	471	-	-	-	-	-	471	-
LAW ENFORCEMENT ASSISTANCE ADMIN.	4,675	-	-	-	-	240	1,735	2,700

AGRICULTURAL RESEARCH SERVICE..........	1,146	-	1,041	-	-	-	48	57
COOPERATIVE STATE RESEARCH SERVICE.....	16,363	-	15,497	-	-	-	866	-
ECONOMIC RESEARCH SERVICE..............	15,428	-	14,696	155	-	45	333	199
FARMER COOPERATIVE SERVICE.............	943	-	943	-	-	-	-	-
FOREST SERVICE.........................	3,120	-	2,824	-	-	-	296	-
STATISTICAL REPORTING SERVICE..........	273	-	273	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	9,465	-	9,016	-	-	-	449	-
BUREAU OF THE CENSUS...................	944	-	495	-	-	-	449	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	1,591	-	1,591	-	-	-	-	-
MARITIME ADMINISTRATION................	550	-	550	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	1,872	-	1,872	-	-	-	-	-
OFFICE OF BUSINESS ECONOMICS...........	4,508	-	4,508	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	8,110	25	868	-	420	1,600	4,544	653
DEPARTMENT OF THE ARMY.................	6,230	25	725	-	100	1,150	4,230	-
DEPARTMENT OF THE AIR FORCE............	303	-	-	-	-	-	-	303
DEFENSE AGENCIES.......................	1,110	-	-	-	320	440	-	350
DEPARTMENTWIDE FUNDS...................	467	-	143	-	-	10	314	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	116,866	2,819	8,000	-	716	738	24,339	80,254
HEALTH SERVICES & MENTAL HEALTH ADMIN..	33,517	2,655	7,360	-	-	738	21,312	1,452
NATIONAL INSTITUTES OF HEALTH..........	1,478	164	140	-	451	-	692	31
OFFICE OF CHILD DEVELOPMENT............	2,000	-	500	-	-	-	500	1,000
OFFICE OF EDUCATION....................	53,375	-	-	-	265	-	-	53,110
SOCIAL AND REHABILITATION SERVICE......	12,210	-	-	-	-	-	1,835	10,375
SOCIAL SECURITY ADMINISTRATION.........	14,286	-	-	-	-	-	-	14,286
DEPARTMENT OF THE INTERIOR, TOTAL......	1,810	-	1,093	23	-	260	265	169
BUREAU OF LAND MANAGEMENT..............	58	-	58	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION...........	76	-	45	3	-	5	20	3
BUREAU OF RECLAMATION..................	80	-	80	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	1,596	-	910	20	-	255	245	166
DEPARTMENT OF JUSTICE, TOTAL...........	5,146	-	-	-	-	240	2,206	2,700
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	471	-	-	-	-	-	471	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	4,675	-	-	-	-	240	1,735	2,700
DEPARTMENT OF LABOR, TOTAL.............	12,642	-	12,642	-	-	-	-	-
BUREAU OF LABOR STATISTICS.............	2,617	-	2,617	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	812	-	812	-	-	-	-	-
MANPOWER ADMINISTRATION................	6,680	-	6,680	-	-	-	-	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,533	-	2,533	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	7,080	-	2,789	-	-	250	1,886	2,155
DEPARTMENTAL FUNDS.....................	650	-	-	-	-	-	-	650
AGENCY FOR INTERNATIONAL DEVELOPMENT...	6,430	-	2,789	-	-	250	1,886	1,505
DEPARTMENT OF TRANSPORTATION, TOTAL....	17,455	-	12,347	-	-	400	1,220	3,488
FEDERAL HIGHWAY ADMINISTRATION.........	1,700	-	680	-	-	-	1,020	-
FEDERAL RAILROAD ADMINISTRATION........	3,985	-	3,685	-	-	200	100	-
OFFICE OF THE SECRETARY................	9,575	-	7,250	-	-	-	-	2,325
URBAN MASS TRANSPORTATION ADMIN........	2,195	-	732	-	-	200	100	1,163
OTHER AGENCIES								
ADVISORY COMM ON INTERGOVT RELATIONS...	487	-	243	-	-	244	-	-
CIVIL AERONAUTICS BOARD................	331	-	331	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	808	-	611	-	-	-	51	146
FEDERAL HOME LOAN BANK BOARD...........	497	-	497	-	-	-	-	-
FEDERAL TRADE COMMISSION...............	460	-	460	-	-	-	-	-
NATIONAL SCIENCE FOUNDATION............	41,399	8,222	7,000	1,000	1,500	3,450	2,850	17,377
OFFICE OF ECONOMIC OPPORTUNITY.........	41,700	-	6,400	-	-	-	32,300	3,000
OFFICE OF SCIENCE AND TECHNOLOGY.......	20	3	3	3	-	7	2	2
SMALL BUSINESS ADMINISTRATION..........	205	-	205	-	-	-	-	-
SMITHSONIAN INSTITUTION................	8,059	4,059	-	4,000	-	-	-	-
TENNESSEE VALLEY AUTHORITY.............	386	-	386	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	634	-	541	-	-	93	-	-
VETERANS ADMINISTRATION................	185	-	-	-	-	-	185	-

TABLE C-29. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY IN-DUSTRIAL FIRMS	UNIVER-SITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTI-TUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTI-TUTIONS	OTHER	
TOTAL, ALL AGENCIES....................	2,062,256	658,284	290,137	29,906	718,355	267,429	59,924	3,521	20,078	14,622
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	115,709	85,437	161	-	25,732	-	429	-	8	3,942
AGRICULTURAL RESEARCH SERVICE..........	73,342	66,858	159	-	2,695	-	315	-	-	3,315
COOPERATIVE STATE RESEARCH SERVICE.....	23,200	790	-	-	22,296	-	114	-	-	-
ECONOMIC RESEARCH SERVICE..............	4,322	4,259	2	-	60	-	-	-	1	-
FARMER COOPERATIVE SERVICE.............	221	221	-	-	-	-	-	-	-	-
FOREST SERVICE.........................	14,548	13,264	-	-	650	-	-	-	7	627
STATISTICAL REPORTING SERVICE..........	76	45	-	-	31	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	39,201	35,876	-	-	1,038	-	403	-	1,008	876
BUREAU OF THE CENSUS...................	308	243	-	-	65	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	14,350	13,982	-	-	368	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	21,038	18,146	-	-	605	-	403	-	1,008	876
OFFICE OF BUSINESS ECONOMICS...........	3,505	3,505	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	246,670	95,646	24,854	-	115,383	319	7,329	1,565	22	1,552
DEPARTMENT OF THE ARMY.................	45,451	28,291	692	-	14,394	-	1,461	-	22	591
DEPARTMENT OF THE NAVY.................	81,944	30,233	3,483	-	44,869	84	3,012	-	-	263
DEPARTMENT OF THE AIR FORCE............	81,000	36,604	8,792	-	34,329	25	552	-	-	698
DEFENSE AGENCIES.......................	38,275	518	11,887	-	21,791	210	2,304	1,565	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	387,940	113,661	1,719	-	220,952	1,600	33,823	87	10,023	6,075
HEALTH SERVICES & MENTAL HEALTH ADMIN..	60,340	18,177	767	-	31,679	-	8,090	-	1,444	183
NATIONAL INSTITUTES OF HEALTH..........	319,385	94,783	952	-	185,933	-	23,159	87	8,579	5,892
OFFICE OF EDUCATION....................	7,812	298	-	-	3,340	1,600	2,574	-	-	-
SOCIAL SECURITY ADMINISTRATION.........	403	403	-	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	49,923	39,797	128	-	5,418	-	277	-	4,303	-
BUREAU OF LAND MANAGEMENT..............	15	-	-	-	15	-	-	-	-	-
BUREAU OF MINES........................	6,248	5,727	-	-	521	-	-	-	-	-
BUREAU OF RECLAMATION..................	82	32	-	-	47	-	-	-	3	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	8,459	3,560	-	-	401	-	198	-	4,300	-
GEOLOGICAL SURVEY......................	30,667	30,324	-	-	343	-	-	-	-	-
OFFICE OF SALINE WATER.................	2,174	10	-	-	2,164	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	2,278	144	128	-	1,927	-	79	-	-	-
DEPARTMENT OF LABOR, TOTAL.............	2,052	1,787	34	-	85	-	99	-	47	-
BUREAU OF LABOR STATISTICS.............	1,422	1,422	-	-	-	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	290	290	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	340	75	34	-	85	-	99	-	47	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	21,099	12,343	887	-	2,150	-	1,722	-	3,997	-
FEDERAL HIGHWAY ADMINISTRATION.........	7,390	1,256	887	-	650	-	600	-	3,997	-

AGRICULTURAL RESEARCH SERVICE..........	73,342	66,858	159	-	2,695	-	315	-	-	3,315
COOPERATIVE STATE RESEARCH SERVICE.....	23,200	790	-	-	22,296	-	114	-	-	-
ECONOMIC RESEARCH SERVICE...............	4,322	4,259	2	-	60	-	-	-	1	-
FARMER COOPERATIVE SERVICE..............	221	221	-	-	-	-	-	-	-	-
FOREST SERVICE..........................	14,548	13,264	-	-	650	-	-	-	7	627
STATISTICAL REPORTING SERVICE...........	76	45	-	-	31	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	39,201	35,876	-	-	1,038	-	403	-	1,008	876
BUREAU OF THE CENSUS....................	308	243	-	-	65	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS............	14,350	13,982	-	-	368	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	21,038	18,146	-	-	605	-	403	-	1,008	876
OFFICE OF BUSINESS ECONOMICS............	3,505	3,505	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL............	246,670	95,646	24,854	-	115,383	319	7,329	1,565	22	1,552
DEPARTMENT OF THE ARMY..................	45,451	28,291	692	-	14,394	-	1,461	-	22	591
DEPARTMENT OF THE NAVY..................	81,944	30,233	3,483	-	44,869	84	3,012	-	-	263
DEPARTMENT OF THE AIR FORCE.............	81,000	36,604	8,792	-	34,329	25	552	-	-	698
DEFENSE AGENCIES........................	38,275	518	11,887	-	21,791	210	2,304	1,565	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	387,940	113,661	1,719	-	220,952	1,600	33,823	87	10,023	6,075
HEALTH SERVICES & MENTAL HEALTH ADMIN..	60,340	18,177	767	-	31,679	-	8,090	-	1,444	183
NATIONAL INSTITUTES OF HEALTH...........	319,385	94,783	952	-	185,933	-	23,159	87	8,579	5,892
OFFICE OF EDUCATION.....................	7,812	298	-	-	3,340	1,600	2,574	-	-	-
SOCIAL SECURITY ADMINISTRATION..........	403	403	-	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	49,923	39,797	128	-	5,418	-	277	-	4,303	-
BUREAU OF LAND MANAGEMENT...............	15	-	-	-	15	-	-	-	-	-
BUREAU OF MINES.........................	6,248	5,727	-	-	521	-	-	-	-	-
BUREAU OF RECLAMATION...................	82	32	-	-	47	-	-	-	3	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	8,459	3,560	-	-	401	-	198	-	4,300	-
GEOLOGICAL SURVEY.......................	30,667	30,324	-	-	343	-	-	-	-	-
OFFICE OF SALINE WATER..................	2,174	10	-	-	2,164	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	2,278	144	128	-	1,927	-	79	-	-	-
DEPARTMENT OF LABOR, TOTAL.............	2,052	1,787	34	-	85	-	99	-	47	-
BUREAU OF LABOR STATISTICS..............	1,422	1,422	-	-	-	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN.........	290	290	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION.................	340	75	34	-	85	-	99	-	47	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	21,099	12,343	887	-	2,150	-	1,722	-	3,997	-
FEDERAL HIGHWAY ADMINISTRATION..........	7,390	1,256	887	-	650	-	600	-	3,997	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,127	5	-	-	-	-	1,122	-	-	-
UNITED STATES COAST GUARD...............	11,080	11,080	-	-	-	-	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN.........	1,502	2	-	-	1,500	-	-	-	-	-
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION................	286,669	922	1,092	29,540	79,212	172,118	1,943	1,573	93	176
CIVIL SERVICE COMMISSION................	83	83	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY.........	5,450	50	-	-	4,558	-	809	-	-	33
NATIONAL AERONAUTICS & SPACE ADMIN.....	637,034	238,696	260,267	366	60,761	69,389	7,183	168	-	204
NATIONAL SCIENCE FOUNDATION.............	244,977	11,200	990	-	200,951	24,003	5,907	128	34	1,764
OFFICE OF ECONOMIC OPPORTUNITY..........	1,600	600	-	-	1,000	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	372	372	-	-	-	-	-	-	-	-
SMITHSONIAN INSTITUTION.................	18,217	16,634	-	-	1,080	-	-	-	503	-
VETERANS ADMINISTRATION.................	5,260	5,180	5	-	35	-	-	-	40	-

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-30. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	FOREIGN
TOTAL, ALL AGENCIES....................	2,165,031	669,135	321,088	30,394	743,618	283,034	65,795	3,042	27,266	21,659
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	122,780	91,249	95	-	26,450	-	280	-	10	4,696
AGRICULTURAL RESEARCH SERVICE..........	76,861	71,250	95	-	1,289	-	156	-	-	4,071
COOPERATIVE STATE RESEARCH SERVICE.....	25,460	871	-	-	24,465	-	124	-	-	-
ECONOMIC RESEARCH SERVICE..............	4,550	4,492	-	-	58	-	-	-	-	-
FARMER COOPERATIVE SERVICE.............	236	236	-	-	-	-	-	-	-	-
FOREST SERVICE.........................	15,595	14,360	-	-	600	-	-	-	10	625
STATISTICAL REPORTING SERVICE..........	78	40	-	-	38	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	49,634	45,512	-	-	1,262	-	573	-	1,356	931
BUREAU OF THE CENSUS...................	406	344	-	-	32	-	30	-	-	-
NATIONAL BUREAU OF STANDARDS...........	15,018	14,591	-	-	416	-	-	-	-	11
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	28,048	24,415	-	-	814	-	543	-	1,356	920
OFFICE OF BUSINESS ECONOMICS...........	4,004	4,004	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS...........	2,158	2,158	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	243,037	101,169	22,201	-	110,944	954	5,255	1,195	-	1,319
DEPARTMENT OF THE ARMY.................	46,597	28,020	915	-	15,577	-	1,378	-	-	707
DEPARTMENT OF THE NAVY.................	85,040	31,534	3,743	-	46,439	104	3,081	-	-	139
DEPARTMENT OF THE AIR FORCE............	80,000	40,509	7,855	-	30,670	-	493	-	-	473
DEFENSE AGENCIES.......................	31,400	1,106	9,688	-	18,258	850	303	1,195	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	451,822	134,089	3,899	-	248,023	2,000	39,296	105	12,478	11,932
HEALTH SERVICES & MENTAL HEALTH ADMIN..	66,711	18,429	2,420	-	32,917	-	10,757	-	2,026	162
NATIONAL INSTITUTES OF HEALTH..........	372,369	114,877	1,479	-	209,170	-	26,039	105	8,929	11,770
OFFICE OF EDUCATION....................	12,317	358	-	-	5,936	2,000	2,500	-	1,523	-
SOCIAL SECURITY ADMINISTRATION.........	425	425	-	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	50,657	39,912	213	-	5,186	-	277	-	5,069	-
BUREAU OF MINES........................	6,457	5,457	-	-	1,000	-	-	-	-	-
BUREAU OF RECLAMATION..................	44	24	-	-	17	-	-	-	3	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	9,551	4,146	-	-	250	-	155	-	5,000	-
GEOLOGICAL SURVEY......................	30,381	30,099	-	-	282	-	-	-	-	-
OFFICE OF SALINE WATER.................	1,600	10	-	-	1,590	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	2,624	176	213	-	2,047	-	122	-	66	-
DEPARTMENT OF LABOR, TOTAL.............	2,578	2,268	40	-	99	-	115	-	56	-
BUREAU OF LABOR STATISTICS.............	1,461	1,461	-	-	-	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	720	720	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	397	87	40	-	99	-	115	-	56	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	20,607	12,648	1,871	-	2,098	-	600	-	3,390	-

AGRICULTURAL RESEARCH SERVICE..........	76,861	71,250	95	-	1,289	-	156	-	-	4,071
COOPERATIVE STATE RESEARCH SERVICE.....	25,460	871	-	-	24,465	-	124	-	-	-
ECONOMIC RESEARCH SERVICE..............	4,550	4,492	-	-	58	-	-	-	-	-
FARMER COOPERATIVE SERVICE.............	236	236	-	-	-	-	-	-	-	-
FOREST SERVICE.........................	15,595	14,360	-	-	600	-	-	-	10	625
STATISTICAL REPORTING SERVICE..........	78	40	-	-	38	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	49,634	45,512	-	-	1,262	-	573	-	1,356	931
BUREAU OF THE CENSUS...................	406	344	-	-	32	-	30	-	-	-
NATIONAL BUREAU OF STANDARDS...........	15,018	14,591	-	-	416	-	-	-	-	11
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	28,048	24,415	-	-	814	-	543	-	1,356	920
OFFICE OF BUSINESS ECONOMICS...........	4,004	4,004	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS...........	2,158	2,158	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	243,037	101,169	22,201	-	110,944	954	5,255	1,195	-	1,319
DEPARTMENT OF THE ARMY.................	46,597	28,020	915	-	15,577	-	1,378	-	-	707
DEPARTMENT OF THE NAVY.................	85,040	31,534	3,743	-	46,439	104	3,081	-	-	139
DEPARTMENT OF THE AIR FORCE............	80,000	40,509	7,855	-	30,670	-	493	-	-	473
DEFENSE AGENCIES.......................	31,400	1,106	9,688	-	18,258	850	303	1,195	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	451,822	134,089	3,899	-	248,023	2,000	39,296	105	12,478	11,932
HEALTH SERVICES & MENTAL HEALTH ADMIN..	66,711	18,429	2,420	-	32,917	-	10,757	-	2,026	162
NATIONAL INSTITUTES OF HEALTH..........	372,369	114,877	1,479	-	209,170	-	26,039	105	8,929	11,770
OFFICE OF EDUCATION....................	12,317	358	-	-	5,936	2,000	2,500	-	1,523	-
SOCIAL SECURITY ADMINISTRATION.........	425	425	-	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	50,657	39,912	213	-	5,186	-	277	-	5,069	-
BUREAU OF MINES........................	6,457	5,457	-	-	1,000	-	-	-	-	-
BUREAU OF RECLAMATION..................	44	24	-	-	17	-	-	-	3	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	9,551	4,146	-	-	250	-	155	-	5,000	-
GEOLOGICAL SURVEY......................	30,381	30,099	-	-	282	-	-	-	-	-
OFFICE OF SALINE WATER.................	1,600	10	-	-	1,590	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	2,624	176	213	-	2,047	-	122	-	66	-
DEPARTMENT OF LABOR, TOTAL.............	2,578	2,268	40	-	99	-	115	-	56	-
BUREAU OF LABOR STATISTICS.............	1,461	1,461	-	-	-	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	720	720	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	397	87	40	-	99	-	115	-	56	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	20,607	12,648	1,871	-	2,098	-	600	-	3,390	-
FEDERAL HIGHWAY ADMINISTRATION.........	6,463	1,099	776	-	598	-	600	-	3,390	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,100	5	1,095	-	-	-	-	-	-	-
UNITED STATES COAST GUARD..............	11,542	11,542	-	-	-	-	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	1,502	2	-	-	1,500	-	-	-	-	-
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION...............	278,118	587	809	29,081	74,380	169,956	1,646	1,493	50	116
CIVIL SERVICE COMMISSION...............	106	106	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	5,941	50	-	-	4,502	-	801	-	-	588
NATIONAL AERONAUTICS & SPACE ADMIN.....	626,068	198,372	289,979	313	51,040	79,193	6,932	49	-	190
NATIONAL SCIENCE FOUNDATION............	285,136	17,660	1,976	1,000	217,085	30,931	10,020	200	4,377	1,887
OFFICE OF ECONOMIC OPPORTUNITY.........	2,400	960	-	-	1,440	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	396	396	-	-	-	-	-	-	-	-
SMITHSONIAN INSTITUTION................	20,346	18,842	-	-	1,064	-	-	-	440	-
VETERANS ADMINISTRATION................	5,405	5,315	5	-	45	-	-	-	40	-

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-31. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	
TOTAL, ALL AGENCIES....................	2,399,104	704,806	401,254	32,772	842,949	286,068	73,353	2,792	31,276	23,834
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	127,585	90,619	95	-	28,593	-	256	-	10	8,012
AGRICULTURAL RESEARCH SERVICE..........	79,088	71,067	95	-	988	-	126	-	-	6,812
COOPERATIVE STATE RESEARCH SERVICE.....	27,969	930	-	-	26,909	-	130	-	-	-
ECONOMIC RESEARCH SERVICE..............	4,474	4,416	-	-	58	-	-	-	-	-
FARMER COOPERATIVE SERVICE.............	236	236	-	-	-	-	-	-	-	-
FOREST SERVICE.........................	15,740	13,930	-	-	600	-	-	-	10	1,200
STATISTICAL REPORTING SERVICE..........	78	40	-	-	38	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	57,730	53,012	-	-	1,508	-	692	-	1,654	864
BUREAU OF THE CENSUS...................	406	321	-	-	55	-	30	-	-	-
NATIONAL BUREAU OF STANDARDS...........	15,341	14,880	-	-	461	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	33,944	29,772	-	-	992	-	662	-	1,654	864
OFFICE OF BUSINESS ECONOMICS...........	4,508	4,508	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS...........	3,531	3,531	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	245,486	103,663	22,323	-	110,864	1,052	5,115	1,100	20	1,349
DEPARTMENT OF THE ARMY.................	46,639	27,287	850	-	16,334	-	1,358	-	20	790
DEPARTMENT OF THE NAVY.................	88,747	31,902	7,258	-	46,134	52	3,292	-	-	109
DEPARTMENT OF THE AIR FORCE............	81,000	43,794	7,399	-	28,892	-	465	-	-	450
DEFENSE AGENCIES.......................	29,100	680	6,816	-	19,504	1,000	-	1,100	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	487,842	160,275	4,145	-	257,388	-	44,309	114	11,243	10,368
HEALTH SERVICES & MENTAL HEALTH ADMIN..	68,810	19,014	2,582	-	34,067	-	11,048	-	1,906	193
NATIONAL INSTITUTES OF HEALTH..........	407,337	140,366	1,563	-	219,121	-	27,161	114	8,837	10,175
OFFICE OF EDUCATION....................	11,215	415	-	-	4,200	-	6,100	-	500	-
SOCIAL SECURITY ADMINISTRATION.........	480	480	-	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	53,114	41,379	329	-	6,073	-	264	-	5,069	-
BUREAU OF MINES........................	7,686	6,186	-	-	1,500	-	-	-	-	-
BUREAU OF RECLAMATION..................	30	20	-	-	7	-	-	-	3	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	9,712	4,257	-	-	300	-	155	-	5,000	-
GEOLOGICAL SURVEY......................	31,024	30,704	-	-	320	-	-	-	-	-
OFFICE OF SALINE WATER.................	1,700	10	-	-	1,690	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	2,962	202	329	-	2,256	-	109	-	66	-
DEPARTMENT OF LABOR, TOTAL.............	2,712	2,371	44	-	109	-	127	-	61	-
BUREAU OF LABOR STATISTICS.............	1,463	1,463	-	-	-	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	812	812	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	437	96	44	-	109	-	127	-	61	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	22,949	13,276	2,803	-	2,086	-	800	-	3,984	-
FEDERAL HIGHWAY ADMINISTRATION.........	7,564	1,286	908	-	586	-	800	-	3,984	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,900	5	1,895	-	-	-	-	-	-	-
UNITED STATES COAST GUARD..............	11,983	11,983	-	-	-	-	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	1,502	2	-	-	1,500	-	-	-	-	-
OTHER AGENCIES										
[illegible]	[illegible]	[illegible]	658	28,372	66,519	167,365	1,520	1,299	50	120

FARMER COOPERATIVE SERVICE..............										
FOREST SERVICE..........................	15,740	13,930	-	-	600	-	-	-	15	1,200
STATISTICAL REPORTING SERVICE..........	78	40	-	-	38	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	57,730	53,012	-	-	1,508	-	692	-	1,654	864
BUREAU OF THE CENSUS....................	406	321	-	-	55	-	30	-	-	-
NATIONAL BUREAU OF STANDARDS...........	15,341	14,880	-	-	461	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	33,944	29,772	-	-	992	-	662	-	1,654	864
OFFICE OF BUSINESS ECONOMICS...........	4,508	4,508	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS...........	3,531	3,531	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	245,486	103,663	22,323	-	110,864	1,052	5,115	1,100	20	1,349
DEPARTMENT OF THE ARMY.................	46,639	27,287	850	-	16,334	-	1,358	-	20	790
DEPARTMENT OF THE NAVY.................	88,747	31,902	7,258	-	46,134	52	3,292	-	-	109
DEPARTMENT OF THE AIR FORCE............	81,000	43,794	7,399	-	28,892	-	465	-	-	450
DEFENSE AGENCIES.......................	29,100	680	6,816	-	19,504	1,000	-	1,100	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	487,842	160,275	4,145	-	257,388	-	44,309	114	11,243	10,368
HEALTH SERVICES & MENTAL HEALTH ADMIN..	68,810	19,014	2,582	-	34,067	-	11,048	-	1,906	193
NATIONAL INSTITUTES OF HEALTH..........	407,337	140,366	1,563	-	219,121	-	27,161	114	8,837	10,175
OFFICE OF EDUCATION....................	11,215	415	-	-	4,200	-	6,100	-	500	-
SOCIAL SECURITY ADMINISTRATION.........	480	480	-	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	53,114	41,379	329	-	6,073	-	264	-	5,069	-
BUREAU OF MINES........................	7,686	6,186	-	-	1,500	-	-	-	-	-
BUREAU OF RECLAMATION..................	30	20	-	-	7	-	-	-	3	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	9,712	4,257	-	-	300	-	155	-	5,000	-
GEOLOGICAL SURVEY......................	31,024	30,704	-	-	320	-	-	-	-	-
OFFICE OF SALINE WATER.................	1,700	10	-	-	1,690	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	2,962	202	329	-	2,256	-	109	-	66	-
DEPARTMENT OF LABOR, TOTAL.............	2,712	2,371	44	-	109	-	127	-	61	-
BUREAU OF LABOR STATISTICS.............	1,463	1,463	-	-	-	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	812	812	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	437	96	44	-	109	-	127	-	61	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	22,949	13,276	2,803	-	2,086	-	800	-	3,984	-
FEDERAL HIGHWAY ADMINISTRATION.........	7,564	1,286	908	-	586	-	800	-	3,984	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,900	5	1,895	-	-	-	-	-	-	-
UNITED STATES COAST GUARD..............	11,983	11,983	-	-	-	-	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	1,502	2	-	-	1,500	-	-	-	-	-
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION...............	266,359	456	658	28,372	66,519	167,365	1,520	1,299	50	120
CIVIL SERVICE COMMISSION...............	113	113	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	8,428	75	-	-	6,716	-	801	-	-	836
NATIONAL AERONAUTICS & SPACE ADMIN.....	688,371	189,429	368,852	2,400	39,052	83,697	4,673	79	-	189
NATIONAL SCIENCE FOUNDATION............	399,636	18,011	2,000	2,000	318,104	33,954	14,796	200	8,475	2,096
OFFICE OF ECONOMIC OPPORTUNITY.........	5,500	2,200	-	-	3,300	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	432	432	-	-	-	-	-	-	-	-
SMITHSONIAN INSTITUTION................	27,247	23,985	-	-	2,592	-	-	-	670	-
VETERANS ADMINISTRATION................	5,600	5,510	5	-	45	-	-	-	40	-

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-32. FEDERAL OBLIGATIONS FOR BASIC RESEARCH BY DETAILED FIELD OF SCIENCE, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

FIELD OF SCIENCE	ACTUAL, 1970	ESTIMATES	
		1971	1972
TOTAL, ALL FIELDS	2,062,256	2,165,031	2,399,104
LIFE SCIENCES, TOTAL	576,041	631,159	735,335
BIOLOGICAL	427,535	456,290	552,139
CLINICAL MEDICAL	31,683	33,940	30,257
OTHER MEDICAL SCIENCES	112,333	135,148	148,936
LIFE SCIENCES, NEC	4,490	5,781	4,003
PSYCHOLOGY, TOTAL	57,237	60,150	65,977
BIOLOGICAL ASPECTS	29,536	31,424	36,536
SOCIAL ASPECTS	24,721	27,517	28,023
PSYCHOLOGICAL SCIENCES, NEC	2,980	1,209	1,418
PHYSICAL SCIENCES, TOTAL	704,453	725,546	729,986
ASTRONOMY	203,882	213,820	188,742
CHEMISTRY	143,106	145,051	187,138
PHYSICS	352,954	358,450	352,218
PHYSICAL SCIENCES, NEC	4,511	8,225	1,888
ENVIRONMENTAL SCIENCES, TOTAL	352,380	361,592	419,254
ATMOSPHERIC SCIENCES	173,129	172,838	197,571
GEOLOGICAL SCIENCES	124,308	121,851	141,416
OCEANOGRAPHY (EXCLUDING BIOLOGICAL)	54,565	61,622	74,861
ENVIRONMENTAL SCIENCE, NEC	378	5,281	5,406
MATHEMATICS	58,906	53,108	58,194
ENGINEERING, TOTAL	242,641	239,695	247,992
AERONAUTICAL	58,720	59,552	51,096
ASTRONAUTICAL	16,975	14,930	14,307
CHEMICAL	8,925	8,753	11,693
CIVIL	7,634	6,958	17,633
ELECTRICAL	35,236	35,041	33,803
MECHANICAL	42,972	39,958	41,840
METALLURGY & MATERIALS	53,441	52,883	53,150
ENGINEERING, NEC	18,738	21,620	24,470
SOCIAL SCIENCES, TOTAL	66,118	81,421	99,851
ANTHROPOLOGY	8,050	9,248	11,462
ECONOMICS	25,936	30,395	33,538
HISTORY	4,424	4,878	5,051
LINGUISTICS	1,811	1,797	2,250
POLITICAL SCIENCE	3,759	3,405	4,278
SOCIOLOGY	13,122	16,750	20,505
SOCIAL SCIENCES, NEC	9,016	14,948	22,767
OTHER SCIENCES, NEC	4,480	12,360	42,515

TABLE C-33. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOL-OGY	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATHE-MATICS	ENGI-NEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
TOTAL, ALL AGENCIES......................	2,062,256	576,041	57,237	704,453	352,380	58,906	242,641	66,118	4,480
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	115,709	75,667	5	17,796	1,573	307	10,292	10,069	-
AGRICULTURAL RESEARCH SERVICE..........	73,342	49,529	5	15,181	276	99	8,042	210	-
COOPERATIVE STATE RESEARCH SERVICE.....	23,200	15,954	-	1,160	133	-	795	5,158	-
ECONOMIC RESEARCH SERVICE..............	4,322	-	-	-	-	-	-	4,322	-
FARMER COOPERATIVE SERVICE.............	221	-	-	-	-	-	-	221	-
FOREST SERVICE.........................	14,548	10,184	-	1,455	1,164	145	1,455	145	-
STATISTICAL REPORTING SERVICE..........	76	-	-	-	-	63	-	13	-
DEPARTMENT OF COMMERCE, TOTAL..........	39,201	6,943	319	11,510	11,571	420	3,887	4,367	184
BUREAU OF THE CENSUS...................	308	-	109	-	-	178	-	21	-
NATIONAL BUREAU OF STANDARDS...........	14,350	-	-	11,089	-	242	2,835	-	184
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	21,038	6,943	210	421	11,571	-	1,052	841	-
OFFICE OF BUSINESS ECONOMICS...........	3,505	-	-	-	-	-	-	3,505	-
DEPARTMENT OF DEFENSE, TOTAL...........	246,670	28,886	10,482	68,411	49,329	28,994	58,753	1,815	-
DEPARTMENT OF THE ARMY.................	45,451	16,923	878	11,181	4,379	1,925	9,552	613	-
DEPARTMENT OF THE NAVY.................	81,944	9,763	3,946	24,018	27,081	5,728	11,408	-	-
DEPARTMENT OF THE AIR FORCE............	81,000	2,200	759	28,602	17,869	5,634	25,736	200	-
DEFENSE AGENCIES.......................	38,275	-	4,899	4,610	-	15,707	12,057	1,002	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	387,940	300,257	35,380	23,957	165	3,182	2,287	22,528	184
HEALTH SERVICES & MENTAL HEALTH ADMIN..	60,340	23,142	20,674	734	-	-	-	15,790	-
NATIONAL INSTITUTES OF HEALTH..........	319,385	277,115	12,406	23,223	165	3,182	2,287	823	184
OFFICE OF EDUCATION....................	7,812	-	2,300	-	-	-	-	5,512	-
SOCIAL SECURITY ADMINISTRATION.........	403	-	-	-	-	-	-	403	-
DEPARTMENT OF THE INTERIOR, TOTAL......	49,923	8,886	-	8,399	29,183	751	2,313	350	41
BUREAU OF LAND MANAGEMENT..............	15	15	-	-	-	-	-	-	-
BUREAU OF MINES........................	6,248	-	-	4,120	173	120	1,835	-	-
BUREAU OF RECLAMATION..................	82	12	-	-	-	-	39	31	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	8,459	8,459	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	30,667	-	-	1,945	28,146	576	-	-	-
OFFICE OF SALINE WATER.................	2,174	-	-	2,174	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	2,278	400	-	160	864	55	439	319	41
DEPARTMENT OF LABOR, TOTAL.............	2,052	-	-	-	-	-	-	2,052	-
BUREAU OF LABOR STATISTICS.............	1,422	-	-	-	-	-	-	1,422	-
LABOR-MANAGEMENT SERVICES ADMIN........	290	-	-	-	-	-	-	290	-
MANPOWER ADMINISTRATION................	340	-	-	-	-	-	-	340	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	21,099	-	10	-	11,130	55	8,797	1,107	-
FEDERAL HIGHWAY ADMINISTRATION.........	7,390	-	-	-	-	-	7,020	370	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,127	-	-	-	-	-	1,127	-	-
UNITED STATES COAST GUARD..............	11,080	-	-	-	11,080	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	1,502	-	10	-	50	55	650	737	-
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	286,669	37,599	-	230,966	-	5,779	12,325	-	-
CIVIL SERVICE COMMISSION...............	83	-	83	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	5,450	2,254	-	2,501	561	-	132	2	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	637,034	50,509	2,854	262,874	195,218	2,350	121,999	1,230	-
NATIONAL SCIENCE FOUNDATION............	244,977	52,662	7,600	74,649	53,031	17,061	21,669	14,234	4,071
OFFICE OF ECONOMIC OPPORTUNITY.........	1,600	-	-	-	-	-	-	1,600	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	372	114	4	95	33	7	112	7	-
SMITHSONIAN INSTITUTION................	18,217	7,709	-	3,195	586	-	-	6,727	-
VETERANS ADMINISTRATION................	5,260	4,555	500	100	-	-	75	30	-

TABLE C-34. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOL-OGY	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATHE-MATICS	ENGI-NEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
TOTAL, ALL AGENCIES....................	2,165,031	631,159	60,150	725,546	361,592	53,108	239,695	81,421	12,360
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	122,780	81,095	5	18,093	1,682	320	10,760	10,825	-
AGRICULTURAL RESEARCH SERVICE..........	76,861	52,665	5	15,261	293	99	8,329	209	-
COOPERATIVE STATE RESEARCH SERVICE.....	25,460	17,513	-	1,273	141	-	872	5,661	-
ECONOMIC RESEARCH SERVICE..............	4,550	-	-	-	-	-	-	4,550	-
FARMER COOPERATIVE SERVICE.............	236	-	-	-	-	-	-	236	-
FOREST SERVICE.........................	15,595	10,917	-	1,559	1,248	156	1,559	156	-
STATISTICAL REPORTING SERVICE..........	78	-	-	-	-	65	-	13	-
DEPARTMENT OF COMMERCE, TOTAL..........	49,634	9,256	425	13,321	15,426	926	4,935	5,154	191
BUREAU OF THE CENSUS...................	406	-	145	-	-	236	-	25	-
NATIONAL BUREAU OF STANDARDS...........	15,018	-	-	11,617	-	252	2,958	-	191
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	28,048	9,256	280	560	15,426	-	1,401	1,125	-
OFFICE OF BUSINESS ECONOMICS...........	4,004	-	-	-	-	-	-	4,004	-
OFFICE OF TELECOMMUNICATIONS...........	2,158	-	-	1,144	-	438	576	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	243,037	27,999	10,008	64,912	55,791	21,634	60,577	2,116	-
DEPARTMENT OF THE ARMY.................	46,597	16,084	1,126	11,302	4,964	2,099	10,325	697	-
DEPARTMENT OF THE NAVY.................	85,040	10,215	3,734	23,002	29,999	5,717	12,373	-	-
DEPARTMENT OF THE AIR FORCE............	80,000	1,700	1,050	23,661	20,828	5,617	26,844	300	-
DEFENSE AGENCIES.......................	31,400	-	4,098	6,947	-	8,201	11,035	1,119	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	451,822	347,629	37,672	29,247	199	3,848	2,764	30,254	209
HEALTH SERVICES & MENTAL HEALTH ADMIN..	66,711	25,702	19,751	1,156	-	-	-	20,102	-
NATIONAL INSTITUTES OF HEALTH..........	372,369	321,927	14,348	28,091	199	3,848	2,764	983	209
OFFICE OF EDUCATION....................	12,317	-	3,573	-	-	-	-	8,744	-
SOCIAL SECURITY ADMINISTRATION.........	425	-	-	-	-	-	-	425	-
DEPARTMENT OF THE INTERIOR, TOTAL......	50,657	10,024	-	7,773	28,964	684	2,801	366	45
BUREAU OF MINES........................	6,457	-	-	3,972	206	7	2,272	-	-
BUREAU OF RECLAMATION..................	44	12	-	-	-	-	32	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	9,551	9,551	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	30,381	-	-	2,017	27,761	603	-	-	-
OFFICE OF SALINE WATER.................	1,600	-	-	1,600	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	2,624	461	-	184	997	74	497	366	45
DEPARTMENT OF LABOR, TOTAL.............	2,578	-	-	-	-	-	-	2,578	-
BUREAU OF LABOR STATISTICS.............	1,461	-	-	-	-	-	-	1,461	-
LABOR-MANAGEMENT SERVICES ADMIN........	720	-	-	-	-	-	-	720	-
MANPOWER ADMINISTRATION................	397	-	-	-	-	-	-	397	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	20,607	-	10	-	11,592	55	7,870	1,080	-
FEDERAL HIGHWAY ADMINISTRATION.........	6,463	-	-	-	-	-	6,120	343	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,100	-	-	-	-	-	1,100	-	-
UNITED STATES COAST GUARD..............	11,542	-	-	-	11,542	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	1,502	-	10	-	50	55	650	737	-
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	278,118	36,550	-	224,019	-	5,370	12,179	-	-
CIVIL SERVICE COMMISSION...............	106	-	106	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	5,941	2,786	-	2,458	565	-	130	2	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	626,068	42,008	2,835	282,596	184,826	1,410	112,393	-	-
NATIONAL SCIENCE FOUNDATION............	285,136	60,525	8,485	79,341	61,861	18,853	25,082	19,074	11,915
OFFICE OF ECONOMIC OPPORTUNITY.........	2,400	-	-	-	-	-	-	2,400	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	396	121	4	101	35	8	119	8	-
SMITHSONIAN INSTITUTION................	20,346	8,606	-	3,560	651	-	-	7,529	-
VETERANS ADMINISTRATION................	5,405	4,560	600	125	-	-	85	35	-

TABLE C-35. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOL-OGY	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATHE-MATICS	ENGI-NEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
TOTAL, ALL AGENCIES....................	2,399,104	735,335	65,977	729,986	419,254	58,194	247,992	99,851	42,515
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	127,585	85,368	5	18,015	1,715	320	10,855	11,307	-
AGRICULTURAL RESEARCH SERVICE..........	79,088	55,117	5	15,043	293	98	8,323	209	-
COOPERATIVE STATE RESEARCH SERVICE.....	27,969	19,232	-	1,398	163	-	958	6,218	-
ECONOMIC RESEARCH SERVICE..............	4,474	-	-	-	-	-	-	4,474	-
FARMER COOPERATIVE SERVICE.............	236	-	-	-	-	-	-	236	-
FOREST SERVICE.........................	15,740	11,019	-	1,574	1,259	157	1,574	157	-
STATISTICAL REPORTING SERVICE..........	78	-	-	-	-	65	-	13	-
DEPARTMENT OF COMMERCE, TOTAL..........	57,730	11,202	484	13,564	18,670	1,204	6,524	5,891	191
BUREAU OF THE CENSUS...................	406	-	145	-	-	235	-	26	-
NATIONAL BUREAU OF STANDARDS...........	15,341	-	-	11,942	-	252	2,956	-	191
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	33,944	11,202	339	679	18,670	-	1,697	1,357	-
OFFICE OF BUSINESS ECONOMICS...........	4,508	-	-	-	-	-	-	4,508	-
OFFICE OF TELECOMMUNICATIONS...........	3,531	-	-	943	-	717	1,871	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	245,486	28,068	10,078	58,670	58,781	23,682	64,414	1,793	-
DEPARTMENT OF THE ARMY.................	46,639	15,617	1,005	10,788	5,321	2,017	11,161	730	-
DEPARTMENT OF THE NAVY.................	88,747	10,760	3,790	22,788	32,217	6,002	13,190	-	-
DEPARTMENT OF THE AIR FORCE............	81,000	1,691	1,059	23,869	21,243	5,732	27,103	303	-
DEFENSE AGENCIES.......................	29,100	-	4,224	1,225	-	9,931	12,960	760	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	487,842	375,961	40,415	33,083	228	4,395	3,155	30,378	227
HEALTH SERVICES & MENTAL HEALTH ADMIN..	68,810	25,709	21,267	996	-	-	-	20,838	-
NATIONAL INSTITUTES OF HEALTH..........	407,337	350,252	15,878	32,087	228	4,395	3,155	1,115	227
OFFICE OF EDUCATION....................	11,215	-	3,270	-	-	-	-	7,945	-
SOCIAL SECURITY ADMINISTRATION.........	480	-	-	-	-	-	-	480	-
DEPARTMENT OF THE INTERIOR, TOTAL......	53,114	10,243	-	10,991	29,430	720	1,249	432	49
BUREAU OF MINES........................	7,686	-	-	6,986	56	7	637	-	-
BUREAU OF RECLAMATION..................	30	2	-	-	-	-	28	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	9,712	9,712	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	31,024	-	-	2,105	28,287	632	-	-	-
OFFICE OF SALINE WATER.................	1,700	-	-	1,700	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	2,962	529	-	200	1,087	81	584	432	49
DEPARTMENT OF LABOR, TOTAL.............	2,712	-	-	-	-	-	-	2,712	-
BUREAU OF LABOR STATISTICS.............	1,463	-	-	-	-	-	-	1,463	-
LABOR-MANAGEMENT SERVICES ADMIN........	812	-	-	-	-	-	-	812	-
MANPOWER ADMINISTRATION................	437	-	-	-	-	-	-	437	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	22,949	-	10	-	12,033	55	9,714	1,137	-
FEDERAL HIGHWAY ADMINISTRATION.........	7,564	-	-	-	-	-	7,164	400	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,900	-	-	-	-	-	1,900	-	-
UNITED STATES COAST GUARD..............	11,983	-	-	-	11,983	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	1,502	-	10	-	50	55	650	737	-
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	266,359	35,927	-	214,200	-	4,800	11,432	-	-
CIVIL SERVICE COMMISSION...............	113	-	113	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	8,428	5,234	-	2,458	604	-	130	2	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	688,371	89,869	804	275,438	222,071	2,000	98,189	-	-
NATIONAL SCIENCE FOUNDATION............	399,636	74,648	13,463	98,771	74,984	21,010	42,115	32,597	42,048
OFFICE OF ECONOMIC OPPORTUNITY.........	5,500	-	-	-	-	-	-	5,500	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	432	132	5	111	38	8	130	8	-
SMITHSONIAN INSTITUTION................	27,247	13,928	-	4,560	700	-	-	8,059	-
VETERANS ADMINISTRATION................	5,600	4,755	600	125	-	-	85	35	-

TABLE C-36. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	PSYCHOLOGY				PHYSICAL SCIENCES				
	TOTAL	BIOLOGICAL ASPECTS	SOCIAL ASPECTS	PSYCHO-LOGICAL SCIENCES NEC	TOTAL	ASTRONOMY	CHEMISTRY	PHYSICS	PHYSICAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	57,237	29,536	24,721	2,980	704,453	203,882	143,106	352,954	4,511
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	5	-	5	-	17,796	-	15,306	2,490	-
AGRICULTURAL RESEARCH SERVICE..........	5	-	5	-	15,181	-	13,273	1,908	-
COOPERATIVE STATE RESEARCH SERVICE.....	-	-	-	-	1,160	-	1,160	-	-
FOREST SERVICE.........................	-	-	-	-	1,455	-	873	582	-
DEPARTMENT OF COMMERCE, TOTAL..........	319	210	109	-	11,510	823	4,114	6,246	327
BUREAU OF THE CENSUS...................	109	-	109	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	-	-	-	-	11,089	823	3,693	6,246	327
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	210	210	-	-	421	-	421	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	10,482	2,461	7,197	824	68,411	9,578	11,884	42,891	4,058
DEPARTMENT OF THE ARMY.................	878	295	126	457	11,181	-	4,012	6,972	197
DEPARTMENT OF THE NAVY.................	3,946	1,040	2,539	367	24,018	3,796	2,235	17,987	-
DEPARTMENT OF THE AIR FORCE............	759	63	696	-	28,602	5,782	4,888	17,932	-
DEFENSE AGENCIES.......................	4,899	1,063	3,836	-	4,610	-	749	-	3,861
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	35,380	19,339	15,845	196	23,957	-	23,876	49	32
HEALTH SERVICES & MENTAL HEALTH ADMIN..	20,674	11,607	9,067	-	734	-	734	-	-
NATIONAL INSTITUTES OF HEALTH..........	12,406	7,732	4,674	-	23,223	-	23,142	49	32
OFFICE OF EDUCATION....................	2,300	-	2,104	196	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	-	-	-	-	8,399	-	7,220	1,179	-
BUREAU OF MINES........................	-	-	-	-	4,120	-	3,521	599	-
GEOLOGICAL SURVEY......................	-	-	-	-	1,945	-	1,369	576	-
OFFICE OF SALINE WATER.................	-	-	-	-	2,174	-	2,174	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	-	-	-	-	160	-	156	4	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	10	-	10	-	-	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	10	-	10	-	-	-	-	-	-
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	-	-	-	-	230,966	-	39,016	191,950	-
CIVIL SERVICE COMMISSION...............	83	-	83	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	-	-	-	-	2,501	-	1,572	929	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	2,854	2,854	-	-	262,874	170,358	18,287	74,229	-
NATIONAL SCIENCE FOUNDATION............	7,600	4,210	1,430	1,960	74,649	19,922	21,741	32,892	94
OFFICE OF SCIENCE AND TECHNOLOGY.......	4	2	2	-	95	6	30	59	-
SMITHSONIAN INSTITUTION................	-	-	-	-	3,195	3,195	-	-	-
VETERANS ADMINISTRATION................	500	460	40	-	100	-	60	40	-

TABLE C-37. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	PSYCHOLOGY				PHYSICAL SCIENCES				
	TOTAL	BIOLOGICAL ASPECTS	SOCIAL ASPECTS	PSYCHO-LOGICAL SCIENCES NEC	TOTAL	ASTRONOMY	CHEMISTRY	PHYSICS	PHYSICAL SCIENCES NEC
TOTAL, ALL AGENCIES......................	60,150	31,424	27,517	1,209	725,546	213,820	145,051	358,450	8,225
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	5	-	5	-	18,093	-	15,469	2,624	-
AGRICULTURAL RESEARCH SERVICE...........	5	-	5	-	15,261	-	13,260	2,001	-
COOPERATIVE STATE RESEARCH SERVICE.....	-	-	-	-	1,273	-	1,273	-	-
FOREST SERVICE..........................	-	-	-	-	1,559	-	936	623	-
DEPARTMENT OF COMMERCE, TOTAL...........	425	280	145	-	13,321	859	4,439	6,538	1,485
BUREAU OF THE CENSUS....................	145	-	145	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS............	-	-	-	-	11,617	859	3,879	6,538	341
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	280	280	-	-	560	-	560	-	-
OFFICE OF TELECOMMUNICATIONS............	-	-	-	-	1,144	-	-	-	1,144
DEPARTMENT OF DEFENSE, TOTAL............	10,008	2,378	6,751	879	64,912	6,115	12,015	40,175	6,607
DEPARTMENT OF THE ARMY..................	1,126	367	320	439	11,302	-	3,820	7,150	332
DEPARTMENT OF THE NAVY..................	3,734	893	2,401	440	23,002	2,547	3,026	17,429	-
DEPARTMENT OF THE AIR FORCE.............	1,050	105	945	-	23,661	3,568	4,555	15,538	-
DEFENSE AGENCIES........................	4,098	1,013	3,085	-	6,947	-	614	58	6,275
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	37,672	19,104	18,568	-	29,247	-	29,148	61	38
HEALTH SERVICES & MENTAL HEALTH ADMIN..	19,751	10,209	9,542	-	1,156	-	1,156	-	-
NATIONAL INSTITUTES OF HEALTH...........	14,348	8,895	5,453	-	28,091	-	27,992	61	38
OFFICE OF EDUCATION.....................	3,573	-	3,573	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	-	-	-	-	7,773	-	6,559	1,214	-
BUREAU OF MINES.........................	-	-	-	-	3,972	-	3,366	606	-
GEOLOGICAL SURVEY.......................	-	-	-	-	2,017	-	1,414	603	-
OFFICE OF SALINE WATER..................	-	-	-	-	1,600	-	1,600	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	-	-	-	-	184	-	179	5	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	10	-	10	-	-	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	10	-	10	-	-	-	-	-	-
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION................	-	-	-	-	224,019	-	36,755	187,264	-
CIVIL SERVICE COMMISSION................	106	-	106	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY.........	-	-	-	-	2,458	-	1,545	913	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	2,835	2,835	-	-	282,596	180,043	16,058	86,495	-
NATIONAL SCIENCE FOUNDATION.............	8,485	6,285	1,870	330	79,341	23,236	22,956	33,054	95
OFFICE OF SCIENCE AND TECHNOLOGY.......	4	2	2	-	101	7	32	62	-
SMITHSONIAN INSTITUTION.................	-	-	-	-	3,560	3,560	-	-	-
VETERANS ADMINISTRATION.................	600	540	60	-	125	-	75	50	-

TABLE C-38. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	PSYCHOLOGY				PHYSICAL SCIENCES				
	TOTAL	BIOLOGICAL ASPECTS	SOCIAL ASPECTS	PSYCHO-LOGICAL SCIENCES NEC	TOTAL	ASTRONOMY	CHEMISTRY	PHYSICS	PHYSICAL SCIENCES NEC
TOTAL, ALL AGENCIES	65,977	36,536	28,023	1,418	729,986	188,742	187,138	352,218	1,888
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL	5	-	5	-	18,015	-	15,388	2,627	-
AGRICULTURAL RESEARCH SERVICE	5	-	5	-	15,043	-	13,046	1,997	-
COOPERATIVE STATE RESEARCH SERVICE	-	-	-	-	1,398	-	1,398	-	-
FOREST SERVICE	-	-	-	-	1,574	-	944	630	-
DEPARTMENT OF COMMERCE, TOTAL	484	339	145	-	13,564	858	4,705	7,660	341
BUREAU OF THE CENSUS	145	-	145	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS	-	-	-	-	11,942	858	4,026	6,717	341
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	339	339	-	-	679	-	679	-	-
OFFICE OF TELECOMMUNICATIONS	-	-	-	-	943	-	-	943	-
DEPARTMENT OF DEFENSE, TOTAL	10,078	2,569	6,324	1,185	58,670	6,178	11,040	40,182	1,270
DEPARTMENT OF THE ARMY	1,005	326	269	410	10,788	-	3,631	6,887	270
DEPARTMENT OF THE NAVY	3,790	917	2,473	400	22,788	2,520	2,831	17,437	-
DEPARTMENT OF THE AIR FORCE	1,059	106	953	-	23,869	3,658	4,578	15,633	-
DEFENSE AGENCIES	4,224	1,220	2,629	375	1,225	-	-	225	1,000
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	40,415	21,841	18,574	-	33,083	-	32,970	69	44
HEALTH SERVICES & MENTAL HEALTH ADMIN.	21,267	12,109	9,158	-	996	-	996	-	-
NATIONAL INSTITUTES OF HEALTH	15,878	9,732	6,146	-	32,087	-	31,974	69	44
OFFICE OF EDUCATION	3,270	-	3,270	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL	-	-	-	-	10,991	-	7,637	3,354	-
BUREAU OF MINES	-	-	-	-	6,986	-	4,270	2,716	-
GEOLOGICAL SURVEY	-	-	-	-	2,105	-	1,473	632	-
OFFICE OF SALINE WATER	-	-	-	-	1,700	-	1,700	-	-
OFFICE OF WATER RESOURCES RESEARCH	-	-	-	-	200	-	194	6	-
DEPARTMENT OF TRANSPORTATION, TOTAL	10	-	10	-	-	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN.	10	-	10	-	-	-	-	-	-
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION	-	-	-	-	214,200	-	34,580	179,620	-
CIVIL SERVICE COMMISSION	113	-	113	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY	-	-	-	-	2,458	-	1,545	913	-
NATIONAL AERONAUTICS & SPACE ADMIN.	804	804	-	-	275,438	148,445	51,136	75,857	-
NATIONAL SCIENCE FOUNDATION	13,463	10,440	2,790	233	98,771	28,694	28,027	41,817	233
OFFICE OF SCIENCE AND TECHNOLOGY	5	3	2	-	111	7	35	69	-
SMITHSONIAN INSTITUTION	-	-	-	-	4,560	4,560	-	-	-
VETERANS ADMINISTRATION	600	540	60	-	125	-	75	50	-

TABLE C-39. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN LIFE AND ENVIRONMENTAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	LIFE SCIENCES					ENVIRONMENTAL SCIENCES				
	TOTAL	BIO-LOGICAL	CLINICAL MEDICAL	OTHER MEDICAL SCIENCES	LIFE SCIENCES NEC	TOTAL	ATMOS-PHERIC	GEO-LOGICAL	OCEAN-OGRAPHY	ENVIRON-MENTAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	576,041	427,535	31,683	112,333	4,490	352,380	173,129	124,308	54,565	378
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	75,667	74,553	1,050	64	-	1,573	637	936	-	-
AGRICULTURAL RESEARCH SERVICE..........	49,529	49,465	-	64	-	276	68	208	-	-
COOPERATIVE STATE RESEARCH SERVICE.....	15,954	14,904	1,050	-	-	133	133	-	-	-
FOREST SERVICE.........................	10,184	10,184	-	-	-	1,164	436	728	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	6,943	6,943	-	-	-	11,571	8,415	2,314	842	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	6,943	6,943	-	-	-	11,571	8,415	2,314	842	-
DEPARTMENT OF DEFENSE, TOTAL...........	28,886	12,211	16,675	-	-	49,329	23,664	3,949	21,716	-
DEPARTMENT OF THE ARMY.................	16,923	5,696	11,227	-	-	4,379	3,119	1,040	220	-
DEPARTMENT OF THE NAVY.................	9,763	4,315	5,448	-	-	27,081	4,239	1,346	21,496	-
DEPARTMENT OF THE AIR FORCE............	2,200	2,200	-	-	-	17,869	16,306	1,563	-	-
DEFENSE AGENCIES.......................	-	-	-	-	-	-	-	-	-	-
DEPARTMENTWIDE FUNDS...................	-	-	-	-	-	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	300,257	182,180	7,891	110,186	-	165	-	-	-	165
FOOD AND DRUG ADMINISTRATION...........	-	-	-	-	-	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	23,142	15,251	7,891	-	-	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	277,115	166,929	-	110,186	-	165	-	-	-	165
OFFICE OF CHILD DEVELOPMENT............	-	-	-	-	-	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	-	-	-	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	8,886	8,882	-	-	4	29,183	40	28,129	1,000	14
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
BUREAU OF LAND MANAGEMENT..............	15	15	-	-	-	-	-	-	-	-
BUREAU OF MINES........................	-	-	-	-	-	173	-	173	-	-
BUREAU OF RECLAMATION..................	12	12	-	-	-	-	-	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	8,459	8,459	-	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	-	-	-	-	-	28,146	-	27,154	992	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	400	396	-	-	4	864	40	802	8	14
DEPARTMENT OF JUSTICE, TOTAL...........	-	-	-	-	-	-	-	-	-	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	-	-	-	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	-	-	-	-	-	-	-	-	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	-	-	-	-	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	-	-	-	-	-	11,130	-	50	11,080	-
FEDERAL AVIATION ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	-	-	-	-	-	-	-	-	-	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	-	-	-	-	-
UNITED STATES COAST GUARD..............	-	-	-	-	-	11,080	-	-	11,080	-
URBAN MASS TRANSPORTATION ADMIN........	-	-	-	-	-	50	-	50	-	-
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION...............	37,599	37,599	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	2,254	1,471	-	783	-	561	452	-	-	109
NATIONAL AERONAUTICS & SPACE ADMIN.....	50,509	47,687	2,822	-	-	195,218	116,938	78,040	240	-
NATIONAL SCIENCE FOUNDATION............	52,662	47,176	-	1,000	4,486	53,031	22,973	10,288	19,680	90
OFFICE OF ECONOMIC OPPORTUNITY.........	-	-	-	-	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	114	69	45	-	-	33	10	16	7	-
SMITHSONIAN INSTITUTION................	7,709	7,709	-	-	-	586	-	586	-	-

TABLE C-40. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN LIFE AND ENVIRONMENTAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	LIFE SCIENCES					ENVIRONMENTAL SCIENCES				
	TOTAL	BIO-LOGICAL	CLINICAL MEDICAL	OTHER MEDICAL SCIENCES	LIFE SCIENCES NEC	TOTAL	ATMOS-PHERIC	GEO-LOGICAL	OCEAN-OGRAPHY	ENVIRON-MENTAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	631,159	456,290	33,940	135,148	5,781	361,592	172,838	121,851	61,622	5,281
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	81,095	79,864	1,152	79	-	1,682	681	1,001	-	-
AGRICULTURAL RESEARCH SERVICE..........	52,665	52,586	-	79	-	293	72	221	-	-
COOPERATIVE STATE RESEARCH SERVICE.....	17,513	16,361	1,152	-	-	141	141	-	-	-
FOREST SERVICE.........................	10,917	10,917	-	-	-	1,248	468	780	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	9,256	9,256	-	-	-	15,426	11,219	3,085	1,122	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	9,256	9,256	-	-	-	15,426	11,219	3,085	1,122	-
DEPARTMENT OF DEFENSE, TOTAL...........	27,999	12,674	15,325	-	-	55,791	26,352	4,703	24,736	-
DEPARTMENT OF THE ARMY.................	16,084	6,238	9,846	-	-	4,964	3,196	1,148	620	-
DEPARTMENT OF THE NAVY.................	10,215	4,736	5,479	-	-	29,999	4,437	1,446	24,116	-
DEPARTMENT OF THE AIR FORCE............	1,700	1,700	-	-	-	20,828	18,719	2,109	-	-
DEFENSE AGENCIES.......................	-	-	-	-	-	-	-	-	-	-
DEPARTMENTWIDE FUNDS...................	-	-	-	-	-	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	347,629	203,294	11,349	132,986	-	199	-	-	-	199
FOOD AND DRUG ADMINISTRATION...........	-	-	-	-	-	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	25,702	14,353	11,349	-	-	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	321,927	188,941	-	132,986	-	199	-	-	-	199
OFFICE OF CHILD DEVELOPMENT............	-	-	-	-	-	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	-	-	-	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	10,024	10,020	-	-	4	28,964	46	27,876	1,027	15
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
BUREAU OF LAND MANAGEMENT..............	-	-	-	-	-	-	-	-	-	-
BUREAU OF MINES........................	-	-	-	-	-	206	-	206	-	-
BUREAU OF RECLAMATION..................	12	12	-	-	-	-	-	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	9,551	9,551	-	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	-	-	-	-	-	27,761	-	26,743	1,018	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	461	457	-	-	4	997	46	927	9	15
DEPARTMENT OF JUSTICE, TOTAL...........	-	-	-	-	-	-	-	-	-	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	-	-	-	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	-	-	-	-	-	-	-	-	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	-	-	-	-	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	-	-	-	-	-	11,592	-	50	11,542	-
FEDERAL AVIATION ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	-	-	-	-	-	-	-	-	-	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	-	-	-	-	-
UNITED STATES COAST GUARD..............	-	-	-	-	-	11,542	-	-	11,542	-
URBAN MASS TRANSPORTATION ADMIN........	-	-	-	-	-	50	-	50	-	-
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION...............	36,550	36,550	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	2,786	2,003	-	783	-	565	444	-	-	121
NATIONAL AERONAUTICS & SPACE ADMIN.....	42,008	39,141	2,867	-	-	184,826	111,604	72,979	243	-
NATIONAL SCIENCE FOUNDATION............	60,525	53,748	-	1,000	5,777	61,861	22,481	11,489	22,945	4,946
OFFICE OF ECONOMIC OPPORTUNITY.........	-	-	-	-	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	121	74	47	-	-	35	11	17	7	-
SMITHSONIAN INSTITUTION................	8,606	8,606	-	-	-	651	-	651	-	-
TENNESSEE VALLEY AUTHORITY.............	-	-	-	-	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	-	-	-	-	-	-	-	-	-	-
VETERANS ADMINISTRATION................	4,560	1,060	3,200	300	-	-	-	-	-	-

TABLE C-41. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN LIFE AND ENVIRONMENTAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	LIFE SCIENCES					ENVIRONMENTAL SCIENCES				
	TOTAL	BIO-LOGICAL	CLINICAL MEDICAL	OTHER MEDICAL SCIENCES	LIFE SCIENCES NEC	TOTAL	ATMOS-PHERIC	GEO-LOGICAL	OCEAN-OGRAPHY	ENVIRON-MENTAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	735,335	552,139	30,257	148,936	4,003	419,254	197,571	141,416	74,861	5,406
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	85,368	83,971	1,265	132	-	1,715	707	1,008	-	-
AGRICULTURAL RESEARCH SERVICE..........	55,117	54,985	-	132	-	293	72	221	-	-
COOPERATIVE STATE RESEARCH SERVICE.....	19,232	17,967	1,265	-	-	163	163	-	-	-
FOREST SERVICE.........................	11,019	11,019	-	-	-	1,259	472	787	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	11,202	11,202	-	-	-	18,670	13,578	3,734	1,358	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	11,202	11,202	-	-	-	18,670	13,578	3,734	1,358	-
DEPARTMENT OF DEFENSE, TOTAL...........	28,068	12,103	15,965	-	-	58,781	26,965	4,840	26,976	-
DEPARTMENT OF THE ARMY.................	15,617	5,446	10,171	-	-	5,321	3,452	1,149	720	-
DEPARTMENT OF THE NAVY.................	10,760	4,966	5,794	-	-	32,217	4,329	1,632	26,256	-
DEPARTMENT OF THE AIR FORCE............	1,691	1,691	-	-	-	21,243	19,184	2,059	-	-
DEFENSE AGENCIES.......................	-	-	-	-	-	-	-	-	-	-
DEPARTMENTWIDE FUNDS...................	-	-	-	-	-	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	375,961	223,492	8,343	144,126	-	228	-	-	-	228
FOOD AND DRUG ADMINISTRATION...........	-	-	-	-	-	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	25,709	17,366	8,343	-	-	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	350,252	206,126	-	144,126	-	228	-	-	-	228
OFFICE OF CHILD DEVELOPMENT............	-	-	-	-	-	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	-	-	-	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	10,243	10,240	-	-	3	29,430	53	28,182	1,177	18
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
BUREAU OF LAND MANAGEMENT..............	-	-	-	-	-	-	-	-	-	-
BUREAU OF MINES........................	-	-	-	-	-	56	-	56	-	-
BUREAU OF RECLAMATION..................	2	2	-	-	-	-	-	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	9,712	9,712	-	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	-	-	-	-	-	28,287	-	27,122	1,165	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	529	526	-	-	3	1,087	53	1,004	12	18
DEPARTMENT OF JUSTICE, TOTAL...........	-	-	-	-	-	-	-	-	-	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	-	-	-	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	-	-	-	-	-	-	-	-	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	-	-	-	-	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	-	-	-	-	-	12,033	-	50	11,983	-
FEDERAL AVIATION ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	-	-	-	-	-	-	-	-	-	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	-	-	-	-	-
UNITED STATES COAST GUARD..............	-	-	-	-	-	11,983	-	-	11,983	-
URBAN MASS TRANSPORTATION ADMIN........	-	-	-	-	-	50	-	50	-	-
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION...............	35,927	35,927	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	5,234	2,251	-	2,983	-	604	444	-	-	160
NATIONAL AERONAUTICS & SPACE ADMIN.....	89,869	87,242	1,232	1,395	-	222,071	130,812	91,045	214	-
NATIONAL SCIENCE FOUNDATION............	74,648	70,648	-	-	4,000	74,984	25,000	11,839	33,145	5,000
OFFICE OF ECONOMIC OPPORTUNITY.........	-	-	-	-	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	132	80	52	-	-	38	12	18	8	-
SMITHSONIAN INSTITUTION................	13,928	13,928	-	-	-	700	-	700	-	-
TENNESSEE VALLEY AUTHORITY.............	-	-	-	-	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	-	-	-	-	-	-	-	-	-	-
[illegible]	4,755	1,055	3,400	300	-	-	-	-	-	-

TABLE C-42. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	AERO-NAUTICAL	ASTRO-NAUTICAL	CHEMICAL	CIVIL	ELEC-TRICAL	MECHANICAL	METALLURGY AND MATERIALS	ENGI-NEERING NEC
TOTAL, ALL AGENCIES....................	242,641	58,720	16,975	8,925	7,634	35,236	42,972	53,441	18,738
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	10,292	-	-	2,434	1,087	33	466	-	6,272
AGRICULTURAL RESEARCH SERVICE..........	8,042	-	-	2,289	795	33	321	-	4,604
COOPERATIVE STATE RESEARCH SERVICE.....	795	-	-	-	-	-	-	-	795
FOREST SERVICE.........................	1,455	-	-	145	292	-	145	-	873
DEPARTMENT OF COMMERCE, TOTAL..........	3,887	125	-	-	97	1,193	517	1,537	418
NATIONAL BUREAU OF STANDARDS...........	2,835	125	-	-	97	562	96	1,537	418
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	1,052	-	-	-	-	631	421	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	58,753	566	6,081	1,039	782	13,623	14,298	20,309	2,055
DEPARTMENT OF THE ARMY.................	9,552	-	-	25	782	2,641	1,767	2,282	2,055
DEPARTMENT OF THE NAVY.................	11,408	566	-	1,014	-	-	3,415	6,413	-
DEPARTMENT OF THE AIR FORCE............	25,736	-	6,081	-	-	7,901	9,116	2,638	-
DEFENSE AGENCIES.......................	12,057	-	-	-	-	3,081	-	8,976	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	2,287	-	-	-	-	61	-	-	2,226
NATIONAL INSTITUTES OF HEALTH..........	2,287	-	-	-	-	61	-	-	2,226
DEPARTMENT OF THE INTERIOR, TOTAL......	2,313	-	-	82	248	30	20	1,783	150
BUREAU OF MINES........................	1,835	-	-	52	-	-	-	1,783	-
BUREAU OF RECLAMATION..................	39	-	-	-	19	20	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	439	-	-	30	229	10	20	-	150
DEPARTMENT OF TRANSPORTATION, TOTAL....	8,797	-	-	380	2,625	413	1,962	1,375	2,042
FEDERAL HIGHWAY ADMINISTRATION.........	7,020	-	-	380	2,310	393	700	1,355	1,882
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,127	-	-	-	-	-	1,127	-	-
URBAN MASS TRANSPORTATION ADMIN........	650	-	-	-	315	20	135	20	160
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	12,325	-	-	239	-	-	-	12,086	-
ENVIRONMENTAL PROTECTION AGENCY........	132	-	82	-	-	-	50	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	121,999	57,493	10,796	925	43	14,914	21,832	13,595	2,401
NATIONAL SCIENCE FOUNDATION............	21,669	520	-	3,810	2,736	4,953	3,811	2,740	3,099
OFFICE OF SCIENCE AND TECHNOLOGY.......	112	16	16	16	16	16	16	16	-
VETERANS ADMINISTRATION................	75	-	-	-	-	-	-	-	75

TABLE C-43. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	AERO-NAUTICAL	ASTRO-NAUTICAL	CHEMICAL	CIVIL	ELEC-TRICAL	MECHANICAL	METALLURGY AND MATERIALS	ENGI-NEERING NEC
TOTAL, ALL AGENCIES....................	239,695	59,552	14,930	8,753	6,958	35,041	39,958	52,883	21,620
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	10,760	-	-	2,380	1,154	18	497	-	6,711
AGRICULTURAL RESEARCH SERVICE..........	8,329	-	-	2,224	843	18	341	-	4,903
COOPERATIVE STATE RESEARCH SERVICE.....	872	-	-	-	-	-	-	-	872
FOREST SERVICE.........................	1,559	-	-	156	311	-	156	-	936
DEPARTMENT OF COMMERCE, TOTAL..........	4,935	130	-	-	101	2,004	660	1,605	435
NATIONAL BUREAU OF STANDARDS...........	2,958	130	-	-	101	587	100	1,605	435
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	1,401	-	-	-	-	841	560	-	-
OFFICE OF TELECOMMUNICATIONS...........	576	-	-	-	-	576	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	60,577	1,700	6,180	1,050	936	12,194	13,100	23,357	2,060
DEPARTMENT OF THE ARMY.................	10,325	600	-	120	936	2,792	1,520	2,297	2,060
DEPARTMENT OF THE NAVY.................	12,373	1,100	-	930	-	-	3,244	7,099	-
DEPARTMENT OF THE AIR FORCE............	26,844	-	6,180	-	-	8,444	8,336	3,884	-
DEFENSE AGENCIES.......................	11,035	-	-	-	-	958	-	10,077	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	2,764	-	-	-	-	72	-	-	2,692
NATIONAL INSTITUTES OF HEALTH..........	2,764	-	-	-	-	72	-	-	2,692
DEPARTMENT OF THE INTERIOR, TOTAL......	2,801	-	-	92	271	29	22	2,216	171
BUREAU OF MINES........................	2,272	-	-	58	-	-	-	2,214	-
BUREAU OF RECLAMATION..................	32	-	-	-	12	20	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	497	-	-	34	259	9	22	2	171
DEPARTMENT OF TRANSPORTATION, TOTAL....	7,870	-	-	330	2,329	363	1,847	1,201	1,800
FEDERAL HIGHWAY ADMINISTRATION.........	6,120	-	-	330	2,014	343	612	1,181	1,640
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,100	-	-	-	-	-	1,100	-	-
URBAN MASS TRANSPORTATION ADMIN........	650	-	-	-	315	20	135	20	160
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	12,179	-	-	229	-	-	-	11,950	-
ENVIRONMENTAL PROTECTION AGENCY........	130	-	81	-	-	-	49	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	112,393	56,035	8,652	805	-	12,930	21,016	10,940	2,015
NATIONAL SCIENCE FOUNDATION............	25,082	1,670	-	3,850	2,150	7,414	2,750	1,597	5,651
OFFICE OF SCIENCE AND TECHNOLOGY.......	119	17	17	17	17	17	17	17	-
VETERANS ADMINISTRATION................	85	-	-	-	-	-	-	-	85

TABLE C-44. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	AERO-NAUTICAL	ASTRO-NAUTICAL	CHEMICAL	CIVIL	ELEC-TRICAL	MECHANICAL	METALLURGY AND MATERIALS	ENGI-NEERING NEC
TOTAL, ALL AGENCIES....................	247,992	51,096	14,307	11,693	17,633	33,803	41,840	53,150	24,470
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	10,855	-	-	2,270	1,158	18	489	-	6,920
AGRICULTURAL RESEARCH SERVICE..........	8,323	-	-	2,113	842	18	332	-	5,018
COOPERATIVE STATE RESEARCH SERVICE.....	958	-	-	-	-	-	-	-	958
FOREST SERVICE.........................	1,574	-	-	157	316	-	157	-	944
DEPARTMENT OF COMMERCE, TOTAL..........	6,524	130	-	-	101	3,475	779	1,604	435
NATIONAL BUREAU OF STANDARDS...........	2,956	130	-	-	101	586	100	1,604	435
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	1,697	-	-	-	-	1,018	679	-	-
OFFICE OF TELECOMMUNICATIONS...........	1,871	-	-	-	-	1,871	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	64,414	2,191	6,303	1,175	938	13,566	13,008	25,073	2,160
DEPARTMENT OF THE ARMY.................	11,161	1,061	90	-	938	3,521	1,138	2,253	2,160
DEPARTMENT OF THE NAVY.................	13,190	1,130	-	1,175	-	-	3,393	7,492	-
DEPARTMENT OF THE AIR FORCE............	27,103	-	6,213	-	-	8,585	8,477	3,828	-
DEFENSE AGENCIES.......................	12,960	-	-	-	-	1,460	-	11,500	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	3,155	-	-	-	-	82	-	-	3,073
NATIONAL INSTITUTES OF HEALTH..........	3,155	-	-	-	-	82	-	-	3,073
DEPARTMENT OF THE INTERIOR, TOTAL......	1,249	-	-	96	405	39	30	487	192
BUREAU OF MINES........................	637	-	-	56	98	-	-	483	-
BUREAU OF RECLAMATION..................	28	-	-	-	8	20	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	584	-	-	40	299	19	30	4	192
DEPARTMENT OF TRANSPORTATION, TOTAL....	9,714	-	-	387	2,672	421	2,751	1,403	2,080
FEDERAL HIGHWAY ADMINISTRATION.........	7,164	-	-	387	2,357	401	716	1,383	1,920
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,900	-	-	-	-	-	1,900	-	-
URBAN MASS TRANSPORTATION ADMIN........	650	-	-	-	315	20	135	20	160
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	11,432	-	-	212	-	-	-	11,220	-
ENVIRONMENTAL PROTECTION AGENCY........	130	-	81	-	-	-	49	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	98,189	46,166	7,904	834	-	12,524	19,926	10,835	-
NATIONAL SCIENCE FOUNDATION............	42,115	2,590	-	6,700	12,340	3,660	4,790	2,510	9,525
OFFICE OF SCIENCE AND TECHNOLOGY.......	130	19	19	19	19	18	18	18	-
VETERANS ADMINISTRATION................	85	-	-	-	-	-	-	-	85

TABLE C-45. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	ANTHRO-POLOGY	ECONOMICS	HISTORY	LIN-GUISTICS	POLITICAL SCIENCE	SOCIOLOGY	SOCIAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	66,118	8,050	25,936	4,424	1,811	3,759	13,122	9,016
DEPARTMENTS								
DEPARTMENT OF AGRICULTURE, TOTAL.......	10,069	-	9,389	43	-	43	497	97
AGRICULTURAL RESEARCH SERVICE..........	210	-	192	-	-	-	8	10
COOPERATIVE STATE RESEARCH SERVICE.....	5,158	-	4,885	-	-	-	273	-
ECONOMIC RESEARCH SERVICE..............	4,322	-	3,933	43	-	43	216	87
FARMER COOPERATIVE SERVICE.............	221	-	221	-	-	-	-	-
FOREST SERVICE.........................	145	-	145	-	-	-	-	-
STATISTICAL REPORTING SERVICE..........	13	-	13	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	4,367	-	4,367	-	-	-	-	-
BUREAU OF THE CENSUS...................	21	-	21	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	841	-	841	-	-	-	-	-
OFFICE OF BUSINESS ECONOMICS...........	3,505	-	3,505	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	1,815	-	-	-	111	1,401	303	-
DEPARTMENT OF THE ARMY.................	613	-	-	-	-	310	303	-
DEPARTMENT OF THE AIR FORCE............	200	-	-	-	-	200	-	-
DEFENSE AGENCIES.......................	1,002	-	-	-	111	891	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	22,528	1,654	5,216	-	404	511	9,060	5,683
HEALTH SERVICES & MENTAL HEALTH ADMIN..	15,790	1,533	5,098	-	-	511	8,648	-
NATIONAL INSTITUTES OF HEALTH..........	823	121	118	-	149	-	412	23
OFFICE OF EDUCATION....................	5,512	-	-	-	255	-	-	5,257
SOCIAL SECURITY ADMINISTRATION.........	403	-	-	-	-	-	-	403
DEPARTMENT OF THE INTERIOR, TOTAL......	350	-	225	-	-	45	45	35
BUREAU OF RECLAMATION..................	31	-	31	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	319	-	194	-	-	45	45	35
DEPARTMENT OF LABOR, TOTAL.............	2,052	-	2,052	-	-	-	-	-
BUREAU OF LABOR STATISTICS.............	1,422	-	1,422	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	290	-	290	-	-	-	-	-
MANPOWER ADMINISTRATION................	340	-	340	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	1,107	-	512	-	-	100	275	220
FEDERAL HIGHWAY ADMINISTRATION.........	370	-	145	-	-	-	225	-
URBAN MASS TRANSPORTATION ADMIN........	737	-	367	-	-	100	50	220
OTHER AGENCIES								
ENVIRONMENTAL PROTECTION AGENCY........	2	-	2	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	1,230	-	61	-	-	-	-	1,169
NATIONAL SCIENCE FOUNDATION............	14,234	3,227	4,111	924	1,296	1,554	1,311	1,811
OFFICE OF ECONOMIC OPPORTUNITY.........	1,600	-	-	-	-	-	1,600	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	7	1	1	1	-	2	1	1
SMITHSONIAN INSTITUTION................	6,727	3,168	-	3,456	-	103	-	-
VETERANS ADMINISTRATION................	30	-	-	-	-	-	30	-

TABLE C-46. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	ANTHRO-POLOGY	ECONOMICS	HISTORY	LIN-GUISTICS	POLITICAL SCIENCE	SOCIOLOGY	SOCIAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	81,421	9,248	30,395	4,878	1,797	3,405	16,750	14,948
DEPARTMENTS								
DEPARTMENT OF AGRICULTURE, TOTAL.......	10,825	-	10,098	46	-	45	536	100
AGRICULTURAL RESEARCH SERVICE..........	209	-	191	-	-	-	8	10
COOPERATIVE STATE RESEARCH SERVICE.....	5,661	-	5,361	-	-	-	300	-
ECONOMIC RESEARCH SERVICE..............	4,550	-	4,141	46	-	45	228	90
FARMER COOPERATIVE SERVICE.............	236	-	236	-	-	-	-	-
FOREST SERVICE.........................	156	-	156	-	-	-	-	-
STATISTICAL REPORTING SERVICE..........	13	-	13	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	5,154	-	5,154	-	-	-	-	-
BUREAU OF THE CENSUS...................	25	-	25	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	1,125	-	1,125	-	-	-	-	-
OFFICE OF BUSINESS ECONOMICS...........	4,004	-	4,004	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	2,116	140	100	-	366	860	350	300
DEPARTMENT OF THE ARMY.................	697	140	100	-	-	107	350	-
DEPARTMENT OF THE AIR FORCE............	300	-	-	-	-	-	-	300
DEFENSE AGENCIES.......................	1,119	-	-	-	366	753	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	30,254	1,842	7,026	-	180	692	11,318	9,196
HEALTH SERVICES & MENTAL HEALTH ADMIN..	20,102	1,698	6,898	-	-	692	10,814	-
NATIONAL INSTITUTES OF HEALTH..........	983	144	128	-	180	-	504	27
OFFICE OF EDUCATION....................	8,744	-	-	-	-	-	-	8,744
SOCIAL SECURITY ADMINISTRATION.........	425	-	-	-	-	-	-	425
DEPARTMENT OF THE INTERIOR, TOTAL......	366	-	217	-	-	52	53	44
OFFICE OF WATER RESOURCES RESEARCH.....	366	-	217	-	-	52	53	44
DEPARTMENT OF LABOR, TOTAL.............	2,578	-	2,578	-	-	-	-	-
BUREAU OF LABOR STATISTICS.............	1,461	-	1,461	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	720	-	720	-	-	-	-	-
MANPOWER ADMINISTRATION................	397	-	397	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	1,080	-	504	-	-	100	256	220
FEDERAL HIGHWAY ADMINISTRATION.........	343	-	137	-	-	-	206	-
URBAN MASS TRANSPORTATION ADMIN........	737	-	367	-	-	100	50	220
OTHER AGENCIES								
ENVIRONMENTAL PROTECTION AGENCY........	2	-	2	-	-	-	-	-
NATIONAL SCIENCE FOUNDATION............	19,074	3,666	4,715	900	1,251	1,654	1,801	5,087
OFFICE OF ECONOMIC OPPORTUNITY.........	2,400	-	-	-	-	-	2,400	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	8	1	1	2	-	2	1	1
SMITHSONIAN INSTITUTION................	7,529	3,599	-	3,930	-	-	-	-
VETERANS ADMINISTRATION................	35	-	-	-	-	-	35	-

TABLE C-47. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	ANTHRO-POLOGY	ECONOMICS	HISTORY	LIN-GUISTICS	POLITICAL SCIENCE	SOCIOLOGY	SOCIAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	99,851	11,462	33,538	5,051	2,250	4,278	20,505	22,767
DEPARTMENTS								
DEPARTMENT OF AGRICULTURE, TOTAL.......	11,307	-	10,557	45	-	45	561	99
AGRICULTURAL RESEARCH SERVICE..........	209	-	191	-	-	-	8	10
COOPERATIVE STATE RESEARCH SERVICE.....	6,218	-	5,889	-	-	-	329	-
ECONOMIC RESEARCH SERVICE..............	4,474	-	4,071	45	-	45	224	89
FARMER COOPERATIVE SERVICE.............	236	-	236	-	-	-	-	-
FOREST SERVICE.........................	157	-	157	-	-	-	-	-
STATISTICAL REPORTING SERVICE..........	13	-	13	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	5,891	-	5,891	-	-	-	-	-
BUREAU OF THE CENSUS...................	26	-	26	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	1,357	-	1,357	-	-	-	-	-
OFFICE OF BUSINESS ECONOMICS...........	4,508	-	4,508	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	1,793	-	-	-	420	840	230	303
DEPARTMENT OF THE ARMY.................	730	-	-	-	100	400	230	-
DEPARTMENT OF THE AIR FORCE............	303	-	-	-	-	-	-	303
DEFENSE AGENCIES.......................	760	-	-	-	320	440	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	30,378	1,902	7,500	-	330	738	11,577	8,331
HEALTH SERVICES & MENTAL HEALTH ADMIN..	20,838	1,738	7,360	-	-	738	11,002	-
NATIONAL INSTITUTES OF HEALTH..........	1,115	164	140	-	205	-	575	31
OFFICE OF EDUCATION....................	7,945	-	-	-	125	-	-	7,820
SOCIAL SECURITY ADMINISTRATION.........	480	-	-	-	-	-	-	480
DEPARTMENT OF THE INTERIOR, TOTAL......	432	-	248	5	-	72	61	46
OFFICE OF WATER RESOURCES RESEARCH.....	432	-	248	5	-	72	61	46
DEPARTMENT OF LABOR, TOTAL.............	2,712	-	2,712	-	-	-	-	-
BUREAU OF LABOR STATISTICS.............	1,463	-	1,463	-	-	-	-	-
LABOR-MANAGEMENT SERVICES ADMIN........	812	-	812	-	-	-	-	-
MANPOWER ADMINISTRATION................	437	-	437	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	1,137	-	527	-	-	100	290	220
FEDERAL HIGHWAY ADMINISTRATION.........	400	-	160	-	-	-	240	-
URBAN MASS TRANSPORTATION ADMIN........	737	-	367	-	-	100	50	220
OTHER AGENCIES								
ENVIRONMENTAL PROTECTION AGENCY........	2	-	2	-	-	-	-	-
NATIONAL SCIENCE FOUNDATION............	32,597	5,500	6,100	1,000	1,500	2,480	2,250	13,767
OFFICE OF ECONOMIC OPPORTUNITY.........	5,500	-	-	-	-	-	5,500	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	8	1	1	1	-	3	1	1
SMITHSONIAN INSTITUTION................	8,059	4,059	-	4,000	-	-	-	-
VETERANS ADMINISTRATION................	35	-	-	-	-	-	35	-

TABLE C-48. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	FOREIGN
TOTAL, ALL AGENCIES....................	3,539,650	1,374,509	1,003,980	42,987	633,212	149,761	208,397	41,534	68,123	17,147
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	156,216	114,655	417	-	38,945	-	643	-	4	1,552
AGRICULTURAL RESEARCH SERVICE..........	79,126	74,617	223	-	2,277	-	457	-	-	1,552
COOPERATIVE STATE RESEARCH SERVICE.....	37,852	1,290	-	-	36,376	-	186	-	-	-
ECONOMIC RESEARCH SERVICE..............	10,582	10,424	6	-	148	-	-	-	4	-
FARMER COOPERATIVE SERVICE.............	663	644	-	-	19	-	-	-	-	-
FOREST SERVICE.........................	27,385	27,292	6	-	87	-	-	-	-	-
NATIONAL AGRICULTURAL LIBRARY..........	208	107	93	-	8	-	-	-	-	-
STATISTICAL REPORTING SERVICE..........	400	281	89	-	30	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	54,913	40,301	6,355	-	2,137	-	476	3	5,235	406
BUREAU OF THE CENSUS...................	1,357	1,357	-	-	-	-	-	-	-	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	3,809	524	911	-	344	-	157	-	1,873	-
MARITIME ADMINISTRATION................	4,878	515	4,169	-	194	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	12,705	12,294	-	-	5	-	-	-	-	406
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	31,877	25,327	1,275	-	1,594	-	319	-	3,362	-
PATENT OFFICE..........................	287	284	-	-	-	-	-	3	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	1,310,113	486,575	659,350	3,853	65,073	38,493	26,858	26,238	447	3,226
DEPARTMENT OF THE ARMY.................	246,085	184,532	40,877	-	10,140	2,951	2,659	3,795	447	684
DEPARTMENT OF THE NAVY.................	190,978	126,722	37,843	-	8,622	14,350	3,397	44	-	-
DEPARTMENT OF THE AIR FORCE............	584,000	95,179	443,672	-	31,627	200	12,951	-	-	371
DEFENSE AGENCIES.......................	284,959	79,573	135,555	3,734	14,304	20,972	6,787	21,863	-	2,171
DEPARTMENTWIDE FUNDS...................	4,091	569	1,403	119	380	20	1,064	536	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	741,331	122,047	37,133	-	400,982	3,333	129,449	2,483	36,863	9,041
FOOD AND DRUG ADMINISTRATION...........	21,805	13,350	175	-	4,633	-	1,007	-	2,164	476
HEALTH SERVICES & MENTAL HEALTH ADMIN..	100,018	24,940	2,972	-	39,146	-	14,896	-	15,326	2,738
NATIONAL INSTITUTES OF HEALTH..........	549,403	70,112	33,130	-	330,308	-	98,048	553	13,379	3,873
OFFICE OF CHILD DEVELOPMENT............	1,000	50	-	-	950	-	-	-	-	-
OFFICE OF EDUCATION....................	25,254	953	720	-	10,121	3,333	6,769	1,930	1,415	13
SOCIAL AND REHABILITATION SERVICE......	31,885	998	-	-	15,673	-	8,694	-	4,579	1,941
SOCIAL SECURITY ADMINISTRATION.........	11,966	11,644	136	-	151	-	35	-	-	-
DEPARTMENT OF HOUSING & URBAN DEVELOP..	7,097	50	5,628	-	-	-	1,064	-	355	-
DEPARTMENT OF THE INTERIOR, TOTAL......	71,769	45,923	7,329	375	12,520	-	1,195	97	4,330	-
BONNEVILLE POWER ADMINISTRATION........	524	134	305	-	85	-	-	-	-	-
BUREAU OF LAND MANAGEMENT..............	695	350	-	-	318	-	-	-	27	-
BUREAU OF MINES........................	27,646	26,213	-	-	1,042	-	172	97	122	-
BUREAU OF OUTDOOR RECREATION...........	92	92								

DEPARTMENT OF AGRICULTURE, TOTAL.......	156,216	114,655	417	-	38,945	-	643	-	4	1,552
AGRICULTURAL RESEARCH SERVICE..........	79,126	74,617	223	-	2,277	-	457	-	-	1,552
COOPERATIVE STATE RESEARCH SERVICE.....	37,852	1,290	-	-	36,376	-	186	-	-	-
ECONOMIC RESEARCH SERVICE..............	10,582	10,424	6	-	148	-	-	-	4	-
FARMER COOPERATIVE SERVICE.............	663	644	-	-	19	-	-	-	-	-
FOREST SERVICE.........................	27,385	27,292	6	-	87	-	-	-	-	-
NATIONAL AGRICULTURAL LIBRARY..........	208	107	93	-	8	-	-	-	-	-
STATISTICAL REPORTING SERVICE..........	400	281	89	-	30	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	54,913	40,301	6,355	-	2,137	-	476	3	5,235	406
BUREAU OF THE CENSUS...................	1,357	1,357	-	-	-	-	-	-	-	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	3,809	524	911	-	344	-	157	-	1,873	-
MARITIME ADMINISTRATION................	4,878	515	4,169	-	194	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	12,705	12,294	-	-	5	-	-	-	-	406
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	31,877	25,327	1,275	-	1,594	-	319	-	3,362	-
PATENT OFFICE..........................	287	284	-	-	-	-	-	3	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	1,310,113	486,575	659,350	3,853	65,073	38,493	26,858	26,238	447	3,226
DEPARTMENT OF THE ARMY.................	246,085	184,532	40,877	-	10,140	2,951	2,659	3,795	447	684
DEPARTMENT OF THE NAVY.................	190,978	126,722	37,843	-	8,622	14,350	3,397	44	-	-
DEPARTMENT OF THE AIR FORCE............	584,000	95,179	443,672	-	31,627	200	12,951	-	-	371
DEFENSE AGENCIES.......................	284,959	79,573	135,555	3,734	14,304	20,972	6,787	21,863	-	2,171
DEPARTMENTWIDE FUNDS...................	4,091	569	1,403	119	380	20	1,064	536	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	741,331	122,047	37,133	-	400,982	3,333	129,449	2,483	36,863	9,041
FOOD AND DRUG ADMINISTRATION...........	21,805	13,350	175	-	4,633	-	1,007	-	2,164	476
HEALTH SERVICES & MENTAL HEALTH ADMIN..	100,018	24,940	2,972	-	39,146	-	14,896	-	15,326	2,738
NATIONAL INSTITUTES OF HEALTH..........	549,403	70,112	33,130	-	330,308	-	98,048	553	13,379	3,873
OFFICE OF CHILD DEVELOPMENT............	1,000	50	-	-	950	-	-	-	-	-
OFFICE OF EDUCATION....................	25,254	953	720	-	10,121	3,333	6,769	1,930	1,415	13
SOCIAL AND REHABILITATION SERVICE......	31,885	998	-	-	15,673	-	8,694	-	4,579	1,941
SOCIAL SECURITY ADMINISTRATION.........	11,966	11,644	136	-	151	-	35	-	-	-
DEPARTMENT OF HOUSING & URBAN DEVELOP..	7,097	50	5,628	-	-	-	1,064	-	355	-
DEPARTMENT OF THE INTERIOR, TOTAL......	71,769	45,923	7,329	375	12,520	-	1,195	97	4,330	-
BONNEVILLE POWER ADMINISTRATION........	524	134	305	-	85	-	-	-	-	-
BUREAU OF LAND MANAGEMENT..............	695	350	-	-	318	-	-	-	27	-
BUREAU OF MINES........................	27,646	26,213	-	-	1,042	-	172	97	122	-
BUREAU OF OUTDOOR RECREATION...........	92	92	-	-	-	-	-	-	-	-
BUREAU OF RECLAMATION..................	7,120	2,695	944	-	3,226	-	-	-	255	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	9,582	5,732	-	-	72	-	-	-	3,778	-
GEOLOGICAL SURVEY......................	10,296	9,677	368	-	251	-	-	-	-	-
OFFICE OF COAL RESEARCH................	2,341	300	1,291	-	300	-	450	-	-	-
OFFICE OF SALINE WATER.................	5,001	224	3,946	375	-	-	456	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	8,472	506	475	-	7,226	-	117	-	148	-
DEPARTMENT OF JUSTICE, TOTAL...........	5,334	301	825	-	1,842	-	331	-	2,035	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	839	25	-	-	483	-	331	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	4,495	276	825	-	1,359	-	-	-	2,035	-
DEPARTMENT OF LABOR, TOTAL.............	9,234	4,652	587	-	1,469	-	1,704	-	822	-
BUREAU OF LABOR STATISTICS.............	1,144	1,144	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	5,874	1,292	587	-	1,469	-	1,704	-	822	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,216	2,216	-	-	-	-	-	-	-	-

CONTINUED ON NEXT PAGE

TABLE C-48. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	
POSTAL SERVICE	4,577	1,634	2,117	-	29	-	3	794	-	-
DEPARTMENT OF STATE, TOTAL	18,895	4,771	50	-	5,258	-	8,078	-	49	689
DEPARTMENTAL FUNDS	125	52	-	-	26	-	3	-	44	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	18,627	4,648	-	-	5,232	-	8,058	-	-	689
PEACE CORPS	143	71	50	-	-	-	17	-	5	-
DEPARTMENT OF TRANSPORTATION, TOTAL	67,164	19,500	15,904	-	8,486	-	7,936	222	15,116	-
FEDERAL AVIATION ADMINISTRATION	9,960	9,227	14	-	719	-	-	-	-	-
FEDERAL HIGHWAY ADMINISTRATION	21,218	3,607	2,971	-	-	-	1,694	-	12,946	-
FEDERAL RAILROAD ADMINISTRATION	4,743	850	3,409	-	235	-	85	164	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.	14,765	1,365	3,639	-	4,986	-	2,839	-	1,936	-
OFFICE OF THE SECRETARY	8,956	2,260	5,230	-	852	-	422	58	134	-
UNITED STATES COAST GUARD	2,801	2,184	411	-	106	-	100	-	-	-
URBAN MASS TRANSPORTATION ADMIN	4,721	7	230	-	1,588	-	2,796	-	100	-
DEPARTMENT OF THE TREASURY, TOTAL	286	286	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING	286	286	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ADVISORY COMM ON INTERGOVT RELATIONS	553	553	-	-	-	-	-	-	-	-
ATOMIC ENERGY COMMISSION	146,448	3,852	2,458	37,093	17,372	72,571	2,905	9,735	-	462
CIVIL AERONAUTICS BOARD	263	263	-	-	-	-	-	-	-	-
CIVIL SERVICE COMMISSION	196	196	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY	47,534	18,686	10,233	-	10,360	219	4,776	197	2,422	641
FEDERAL COMMUNICATIONS COMMISSION	1,015	615	400	-	-	-	-	-	-	-
FEDERAL HOME LOAN BANK BOARD	390	291	-	-	99	-	-	-	-	-
FEDERAL TRADE COMMISSION	388	388	-	-	-	-	-	-	-	-
GENERAL SERVICES ADMINISTRATION	215	198	-	-	-	-	17	-	-	-
LIBRARY OF CONGRESS	968	925	43	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	772,698	440,961	243,378	1,666	35,957	33,480	15,420	706	-	1,130
NATIONAL SCIENCE FOUNDATION	29,812	1,500	1,815	-	22,298	1,665	1,800	719	15	-
OFFICE OF ECONOMIC OPPORTUNITY	27,800	3,898	8,359	-	9,764	-	5,467	312	-	-
OFFICE OF EMERGENCY PREPAREDNESS	1,016	620	321	-	-	-	75	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY	557	557	-	-	-	-	-	-	-	-
SMALL BUSINESS ADMINISTRATION	101	10	-	-	91	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY	6,376	6,254	-	-	122	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY	3,732	2,233	1,171	-	100	-	200	28	-	-
UNITED STATES INFORMATION AGENCY	157	100	57	-	-	-	-	-	-	-
VETERANS ADMINISTRATION	52,502	51,714	50	-	308	-	-	-	430	-

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-49. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	FOREIGN
TOTAL, ALL AGENCIES....................	3,830,092	1,432,859	1,083,934	41,685	727,109	144,972	236,838	42,809	86,245	33,641
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	169,830	125,604	237	-	41,508	-	576	-	-	1,905
AGRICULTURAL RESEARCH SERVICE..........	86,420	82,908	107	-	1,227	-	273	-	-	1,905
COOPERATIVE STATE RESEARCH SERVICE.....	41,539	1,421	-	-	39,915	-	203	-	-	-
ECONOMIC RESEARCH SERVICE..............	11,138	10,996	-	-	142	-	-	-	-	-
FARMER COOPERATIVE SERVICE.............	709	634	-	-	75	-	-	-	-	-
FOREST SERVICE.........................	29,355	29,265	5	-	85	-	-	-	-	-
NATIONAL AGRICULTURAL LIBRARY..........	259	102	30	-	27	-	100	-	-	-
STATISTICAL REPORTING SERVICE..........	410	278	95	-	37	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	78,416	52,361	18,627	-	2,939	-	501	-	3,624	364
BUREAU OF THE CENSUS...................	1,759	1,759	-	-	-	-	-	-	-	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	1,844	664	659	-	446	-	75	-	-	-
MARITIME ADMINISTRATION................	17,493	888	16,236	-	369	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	13,884	13,497	33	-	-	-	-	-	-	354
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	42,497	34,614	1,699	-	2,124	-	426	-	3,624	10
OFFICE OF TELECOMMUNICATIONS...........	484	484	-	-	-	-	-	-	-	-
PATENT OFFICE..........................	455	455	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	1,236,296	456,727	628,200	2,612	56,276	31,857	31,539	27,384	30	1,671
DEPARTMENT OF THE ARMY.................	209,661	156,692	33,426	-	10,020	115	5,962	2,936	30	480
DEPARTMENT OF THE NAVY.................	182,960	122,697	34,423	-	9,744	12,483	3,613	-	-	-
DEPARTMENT OF THE AIR FORCE............	564,000	96,457	430,501	-	23,906	185	12,506	-	-	445
DEFENSE AGENCIES.......................	276,123	80,463	128,598	2,352	12,151	19,034	8,596	24,183	-	746
DEPARTMENTWIDE FUNDS...................	3,552	418	1,252	260	455	40	862	265	-	-
DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL	910,400	147,543	45,120	-	474,484	2,721	155,923	2,945	56,800	24,864
FOOD AND DRUG ADMINISTRATION...........	25,922	14,824	120	-	7,800	-	1,151	-	-	2,027
HEALTH SERVICES & MENTAL HEALTH ADMIN..	122,575	28,974	3,482	-	36,272	-	21,680	-	16,553	15,614
NATIONAL INSTITUTES OF HEALTH..........	658,338	88,672	39,825	-	392,292	-	117,368	666	15,757	3,758
OFFICE OF CHILD DEVELOPMENT............	2,000	100	-	-	1,900	-	-	-	-	-
OFFICE OF EDUCATION....................	56,283	1,427	1,350	-	21,172	2,721	7,533	2,279	19,801	-
SOCIAL AND REHABILITATION SERVICE......	32,200	1,017	-	-	14,838	-	8,191	-	4,689	3,465
SOCIAL SECURITY ADMINISTRATION.........	13,082	12,529	343	-	210	-	-	-	-	-
DEPARTMENT OF HOUSING & URBAN DEVELOP..	11,862	50	9,440	-	-	-	1,779	-	593	-
DEPARTMENT OF THE INTERIOR, TOTAL......	83,904	51,953	7,210	400	16,431	-	2,933	-	4,977	-
BONNEVILLE POWER ADMINISTRATION........	474	137	210	-	127	-	-	-	-	-
BUREAU OF LAND MANAGEMENT..............	755	407	-	-	308	-	-	-	40	-
BUREAU OF MINES........................	31,599	28,899	-	-	2,000	-	600	-	100	-
BUREAU OF OUTDOOR RECREATION...........	133	83	-	-	50	-	-	-	-	-
BUREAU OF RECLAMATION..................	8,974	3,384	1,417	-	3,628	-	-	-	545	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	10,581	6,581	-	-	65	-	-	-	3,935	-
GEOLOGICAL SURVEY......................	12,815	11,500	564	-	631	-	-	-	120	-
OFFICE OF COAL RESEARCH................	4,809	100	1,959	-	1,250	-	1,500	-	-	-
OFFICE OF SALINE WATER.................	3,400	200	1,900	400	500	-	400	-	-	-
OFFICE OF THE SECRETARY................	583	33	400	-	150	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	9,781	629	760	-	7,722	-	433	-	237	-
DEPARTMENT OF JUSTICE, TOTAL...........	6,210	327	1,266	-	1,819	-	521	157	2,120	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	1,560	39	421	-	422	-	521	157	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	4,650	288	845	-	1,397	-	-	-	2,120	-

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TABLE C-49. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	
DEPARTMENT OF LABOR, TOTAL.............	9,917	5,071	621	-	1,553	-	1,802	-	870	-
BUREAU OF LABOR STATISTICS.............	1,154	1,154	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	6,213	1,367	621	-	1,553	-	1,802	-	870	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,550	2,550	-	-	-	-	-	-	-	-
POSTAL SERVICE.........................	5,568	1,670	3,225	-	50	-	308	315	-	-
DEPARTMENT OF STATE, TOTAL.............	25,359	4,653	60	-	12,223	-	5,741	-	163	2,519
DEPARTMENTAL FUNDS.....................	350	109	-	-	35	-	43	-	163	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	24,906	4,513	-	-	12,188	-	5,686	-	-	2,519
PEACE CORPS............................	103	31	60	-	-	-	12	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	90,288	32,495	30,898	-	7,238	-	5,136	372	14,101	48
FEDERAL AVIATION ADMINISTRATION........	23,018	18,900	3,385	-	733	-	-	-	-	-
FEDERAL HIGHWAY ADMINISTRATION.........	21,005	2,730	2,940	-	-	-	1,700	-	13,635	-
FEDERAL RAILROAD ADMINISTRATION........	9,846	1,860	6,902	-	516	-	148	372	-	48
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	11,972	3,047	3,300	-	3,040	-	2,350	-	235	-
OFFICE OF THE SECRETARY................	15,594	2,240	12,938	-	416	-	-	-	-	-
UNITED STATES COAST GUARD..............	4,389	2,968	866	-	147	-	408	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	4,464	750	567	-	2,386	-	530	-	231	-
DEPARTMENT OF THE TREASURY, TOTAL......	373	373	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING.......	373	373	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ADVISORY COMM ON INTERGOVT RELATIONS...	477	477	-	-	-	-	-	-	-	-
ATOMIC ENERGY COMMISSION...............	145,297	4,118	2,114	37,536	16,652	71,344	2,718	10,300	-	515
CIVIL AERONAUTICS BOARD................	270	270	-	-	-	-	-	-	-	-
CIVIL SERVICE COMMISSION...............	221	221	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	55,541	19,649	16,525	-	10,590	230	5,175	211	2,469	692
FEDERAL COMMUNICATIONS COMMISSION......	638	638	-	-	-	-	-	-	-	-
FEDERAL HOME LOAN BANK BOARD...........	388	388	-	-	-	-	-	-	-	-
FEDERAL TRADE COMMISSION...............	467	467	-	-	-	-	-	-	-	-
GENERAL SERVICES ADMINISTRATION........	83	65	-	-	-	-	18	-	-	-
LIBRARY OF CONGRESS....................	1,006	1,006	-	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	851,515	454,421	307,272	1,137	37,473	38,373	11,408	368	-	1,063
NATIONAL SCIENCE FOUNDATION............	42,150	2,862	1,530	-	33,789	447	3,065	457	-	-
OFFICE OF ECONOMIC OPPORTUNITY.........	36,750	5,054	10,819	-	13,357	-	7,220	300	-	-
OFFICE OF EMERGENCY PREPAREDNESS.......	995	670	250	-	-	-	75	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	594	594	-	-	-	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY.............	7,478	7,335	-	-	143	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	2,335	1,335	400	-	120	-	400	-	80	-
UNITED STATES INFORMATION AGENCY.......	160	100	60	-	-	-	-	-	-	-
VETERANS ADMINISTRATION................	55,304	54,362	60	-	464	-	-	-	418	-

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-50. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	
TOTAL, ALL AGENCIES....................	4,244,480	1,518,531	1,273,067	42,404	825,581	149,655	257,400	47,255	92,612	37,975
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	175,885	126,682	202	-	45,209	-	604	-	-	3,188
AGRICULTURAL RESEARCH SERVICE..........	88,290	83,727	102	-	1,030	-	243	-	-	3,188
COOPERATIVE STATE RESEARCH SERVICE.....	45,633	1,517	-	-	43,905	-	211	-	-	-
ECONOMIC RESEARCH SERVICE..............	10,954	10,812	-	-	142	-	-	-	-	-
FARMER COOPERATIVE SERVICE.............	707	697	-	-	10	-	-	-	-	-
FOREST SERVICE.........................	29,628	29,538	5	-	85	-	-	-	-	-
NATIONAL AGRICULTURAL LIBRARY..........	263	113	-	-	-	-	150	-	-	-
STATISTICAL REPORTING SERVICE..........	410	278	95	-	37	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	86,042	62,542	15,072	-	4,031	-	614	-	3,571	212
BUREAU OF THE CENSUS...................	1,498	1,498	-	-	-	-	-	-	-	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	1,591	666	435	-	390	-	100	-	-	-
MARITIME ADMINISTRATION................	14,445	845	12,530	-	1,070	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	15,139	14,887	50	-	-	-	-	-	-	202
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	51,430	42,707	2,057	-	2,571	-	514	-	3,571	10
OFFICE OF TELECOMMUNICATIONS...........	1,469	1,469	-	-	-	-	-	-	-	-
PATENT OFFICE..........................	470	470	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	1,388,076	497,639	715,002	3,195	76,190	33,295	29,538	31,144	500	1,573
DEPARTMENT OF THE ARMY.................	233,789	180,708	32,241	-	11,260	850	3,972	3,980	500	278
DEPARTMENT OF THE NAVY.................	203,253	132,058	40,628	-	11,963	14,075	3,759	770	-	-
DEPARTMENT OF THE AIR FORCE............	617,000	102,600	477,696	-	23,807	250	12,247	-	-	400
DEFENSE AGENCIES.......................	330,334	81,773	163,168	3,040	28,716	18,080	8,650	26,012	-	895
DEPARTMENTWIDE FUNDS...................	3,700	500	1,269	155	444	40	910	382	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	1,001,916	137,861	86,371	-	518,098	4,000	167,760	2,923	56,298	28,605
FOOD AND DRUG ADMINISTRATION...........	33,916	20,249	144	-	7,000	-	1,381	-	-	5,142
HEALTH SERVICES & MENTAL HEALTH ADMIN..	119,681	29,607	3,406	-	37,531	-	22,323	-	17,304	9,510
NATIONAL INSTITUTES OF HEALTH..........	747,085	73,055	81,518	-	440,922	-	130,043	723	16,921	3,903
OFFICE OF CHILD DEVELOPMENT............	3,500	140	-	-	3,360	-	-	-	-	-
OFFICE OF EDUCATION....................	51,998	1,475	1,200	-	16,086	4,000	8,017	2,200	19,020	-
SOCIAL AND REHABILITATION SERVICE......	31,930	982	-	-	12,599	-	5,996	-	3,053	9,300
SOCIAL SECURITY ADMINISTRATION.........	13,806	12,353	103	-	600	-	-	-	-	750
DEPARTMENT OF HOUSING & URBAN DEVELOP..	12,740	50	10,142	-	127	-	1,911	-	510	-
DEPARTMENT OF THE INTERIOR, TOTAL......	91,252	53,082	9,462	350	20,227	-	2,291	-	5,465	375
BONNEVILLE POWER ADMINISTRATION........	495	98	253	-	144	-	-	-	-	-
BUREAU OF LAND MANAGEMENT..............	793	448	-	-	305	-	-	-	40	-
BUREAU OF MINES........................	31,855	27,655	-	-	3,500	-	600	-	100	-
BUREAU OF OUTDOOR RECREATION...........	76	76	-	-	-	-	-	-	-	-
BUREAU OF RECLAMATION..................	9,493	3,796	1,681	-	3,500	-	-	-	516	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	11,446	6,946	-	-	100	-	-	-	4,400	-
GEOLOGICAL SURVEY......................	17,506	12,974	2,033	-	2,324	-	-	-	175	-
OFFICE OF COAL RESEARCH................	4,059	100	1,809	-	1,250	-	900	-	-	-
OFFICE OF SALINE WATER.................	3,775	200	2,325	350	500	-	400	-	-	-
OFFICE OF THE SECRETARY................	1,193	68	190	-	560	-	-	-	-	375
OFFICE OF WATER RESOURCES RESEARCH.....	10,561	721	1,171	-	8,044	-	391	-	234	-
DEPARTMENT OF JUSTICE, TOTAL...........	15,162	1,005	3,832	-	3,573	-	890	127	5,735	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	2,162	63	509	-	573	-	890	127	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	13,000	942	3,323	-	3,000	-	-	-	5,735	-

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TABLE C-50. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	
DEPARTMENT OF LABOR, TOTAL.............	9,930	5,061	624	-	1,561	-	1,810	-	874	-
BUREAU OF LABOR STATISTICS.............	1,154	1,154	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	6,243	1,374	624	-	1,561	-	1,810	-	874	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,533	2,533	-	-	-	-	-	-	-	-
POSTAL SERVICE.........................	5,860	2,506	2,639	-	100	-	300	315	-	-
DEPARTMENT OF STATE, TOTAL.............	28,204	4,749	-	-	14,576	-	6,166	-	463	2,250
DEPARTMENTAL FUNDS.....................	650	109	-	-	35	-	43	-	463	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	27,554	4,640	-	-	14,541	-	6,123	-	-	2,250
DEPARTMENT OF TRANSPORTATION, TOTAL....	161,000	45,480	79,848	366	9,060	-	9,700	300	16,246	-
FEDERAL AVIATION ADMINISTRATION........	60,371	22,871	37,220	-	280	-	-	-	-	-
FEDERAL HIGHWAY ADMINISTRATION.........	24,584	3,196	3,442	-	-	-	2,000	-	15,946	-
FEDERAL RAILROAD ADMINISTRATION........	10,500	1,933	7,901	366	-	-	-	300	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	21,050	3,600	6,650	-	6,100	-	4,700	-	-	-
OFFICE OF THE SECRETARY................	31,000	8,000	21,400	-	1,000	-	500	-	100	-
UNITED STATES COAST GUARD..............	8,585	5,280	2,325	-	180	-	800	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	4,910	600	910	-	1,500	-	1,700	-	200	-
DEPARTMENT OF THE TREASURY, TOTAL......	390	390	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING.......	390	390	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ADVISORY COMM ON INTERGOVT RELATIONS...	487	487	-	-	-	-	-	-	-	-
ATOMIC ENERGY COMMISSION...............	145,025	4,214	2,404	37,233	16,365	70,915	2,806	10,581	-	507
CIVIL AERONAUTICS BOARD................	331	331	-	-	-	-	-	-	-	-
CIVIL SERVICE COMMISSION...............	237	237	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	70,302	27,829	23,010	-	11,517	183	4,972	164	2,427	200
FEDERAL COMMUNICATIONS COMMISSION......	869	669	160	-	40	-	-	-	-	-
FEDERAL HOME LOAN BANK BOARD...........	497	497	-	-	-	-	-	-	-	-
FEDERAL TRADE COMMISSION...............	460	460	-	-	-	-	-	-	-	-
GENERAL SERVICES ADMINISTRATION........	20	20	-	-	-	-	-	-	-	-
LIBRARY OF CONGRESS....................	1,175	1,175	-	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	873,546	472,311	310,549	260	32,410	40,262	15,988	701	-	1,065
NATIONAL SCIENCE FOUNDATION............	70,400	3,050	2,000	1,000	58,350	1,000	4,000	1,000	-	-
OFFICE OF ECONOMIC OPPORTUNITY.........	37,100	5,194	11,130	-	13,356	-	7,420	-	-	-
OFFICE OF EMERGENCY PREPAREDNESS.......	535	375	85	-	-	-	75	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	648	648	-	-	-	-	-	-	-	-
SMALL BUSINESS ADMINISTRATION..........	205	10	-	-	90	-	-	-	105	-
TENNESSEE VALLEY AUTHORITY.............	8,197	8,100	-	-	97	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	2,420	1,300	425	-	140	-	555	-	-	-
UNITED STATES INFORMATION AGENCY.......	150	100	50	-	-	-	-	-	-	-
VETERANS ADMINISTRATION................	55,419	54,477	60	-	464	-	-	-	418	-

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

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TABLE C-51. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH BY DETAILED FIELD OF SCIENCE, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

FIELD OF SCIENCE	ACTUAL, 1970	ESTIMATES	
		1971	1972
TOTAL, ALL FIELDS	3,539,650	3,830,092	4,244,480
LIFE SCIENCES, TOTAL	957,391	1,103,977	1,209,762
BIOLOGICAL	257,247	279,005	298,736
CLINICAL MEDICAL	653,950	770,237	844,027
OTHER MEDICAL SCIENCES	32,567	33,213	44,233
LIFE SCIENCES, NEC	13,627	21,522	22,766
PSYCHOLOGY, TOTAL	56,091	65,016	74,436
BIOLOGICAL ASPECTS	15,605	15,955	21,854
SOCIAL ASPECTS	39,454	47,052	51,031
PSYCHOLOGICAL SCIENCES, NEC	1,032	2,009	1,551
PHYSICAL SCIENCES, TOTAL	305,997	299,931	356,497
ASTRONOMY	7,068	8,376	10,030
CHEMISTRY	100,788	101,576	117,210
PHYSICS	185,379	177,856	216,203
PHYSICAL SCIENCES, NEC	12,762	12,123	13,054
ENVIRONMENTAL SCIENCES, TOTAL	234,251	270,532	282,734
ATMOSPHERIC SCIENCES	114,608	138,355	142,730
GEOLOGICAL SCIENCES	64,589	71,372	74,913
OCEANOGRAPHY (EXCLUDING BIOLOGICAL)	36,657	35,668	37,287
ENVIRONMENTAL SCIENCE, NEC	18,397	25,137	27,804
MATHEMATICS	43,232	50,855	53,576
ENGINEERING, TOTAL	1,725,098	1,774,211	1,949,663
AERONAUTICAL	407,744	414,083	423,502
ASTRONAUTICAL	272,550	272,920	314,639
CHEMICAL	108,299	104,546	111,157
CIVIL	53,137	73,467	88,545
ELECTRICAL	319,115	321,299	359,830
MECHANICAL	97,039	105,369	102,009
METALLURGY & MATERIALS	98,108	101,851	106,600
ENGINEERING, NEC	369,106	380,676	443,381
SOCIAL SCIENCES, TOTAL	149,734	191,573	211,167
ANTHROPOLOGY	713	1,164	3,666
ECONOMICS	58,396	58,949	65,168
HISTORY	118	128	130
LINGUISTICS	178	215	386
POLITICAL SCIENCE	3,658	2,665	3,049
SOCIOLOGY	25,365	33,259	51,335
SOCIAL SCIENCES, NEC	61,306	95,193	87,433
OTHER SCIENCES, NEC	67,856	73,997	106,645

TABLE C-52. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1970 .

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOL-OGY	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATHE-MATICS	ENGI-NEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
TOTAL, ALL AGENCIES....................	3,539,650	957,391	56,091	305,997	234,251	43,232	1,725,098	149,734	67,856
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	156,216	91,014	27	19,112	3,265	379	18,617	23,594	208
AGRICULTURAL RESEARCH SERVICE..........	79,126	49,102	27	15,576	583	233	12,665	940	-
COOPERATIVE STATE RESEARCH SERVICE.....	37,852	26,029	-	1,893	217	-	1,297	8,416	-
ECONOMIC RESEARCH SERVICE..............	10,582	-	-	-	-	-	-	10,582	-
FARMER COOPERATIVE SERVICE.............	663	-	-	-	-	-	-	663	-
FOREST SERVICE.........................	27,385	15,883	-	1,643	2,465	-	4,655	2,739	-
NATIONAL AGRICULTURAL LIBRARY..........	208	-	-	-	-	-	-	-	208
STATISTICAL REPORTING SERVICE..........	400	-	-	-	-	146	-	254	-
DEPARTMENT OF COMMERCE, TOTAL..........	54,913	17,214	777	5,646	10,519	927	11,802	6,459	1,569
BUREAU OF THE CENSUS...................	1,357	-	458	-	-	88	-	811	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	3,809	-	-	-	-	-	-	3,809	-
MARITIME ADMINISTRATION................	4,878	-	-	-	-	89	3,268	1,521	-
NATIONAL BUREAU OF STANDARDS...........	12,705	-	-	4,690	-	750	6,621	-	644
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	31,877	17,214	319	956	10,519	-	1,913	318	638
PATENT OFFICE..........................	287	-	-	-	-	-	-	-	287
DEPARTMENT OF DEFENSE, TOTAL...........	1,310,113	75,117	15,112	151,228	78,924	32,905	914,022	2,878	39,927
DEPARTMENT OF THE ARMY.................	246,085	35,940	6,064	52,840	9,562	3,695	119,505	2,154	16,325
DEPARTMENT OF THE NAVY.................	190,978	5,832	2,311	38,491	19,814	23,298	101,232	-	-
DEPARTMENT OF THE AIR FORCE............	584,000	24,507	5,625	2,934	7,931	474	542,529	-	-
DEFENSE AGENCIES.......................	284,959	8,218	829	56,282	41,617	5,008	149,703	398	22,904
DEPARTMENTWIDE FUNDS...................	4,091	620	283	681	-	430	1,053	326	698
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	741,331	596,851	25,104	17,326	465	4,988	20,380	61,840	14,377
FOOD AND DRUG ADMINISTRATION...........	21,805	15,492	-	6,313	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	100,018	75,908	13,297	-	-	349	87	9,736	641
NATIONAL INSTITUTES OF HEALTH..........	549,403	493,831	5,309	11,013	465	4,639	20,148	262	13,736
OFFICE OF CHILD DEVELOPMENT............	1,000	500	-	-	-	-	-	500	-
OFFICE OF EDUCATION....................	25,254	-	4,525	-	-	-	-	20,729	-
SOCIAL AND REHABILITATION SERVICE......	31,885	11,120	1,973	-	-	-	145	18,647	-
SOCIAL SECURITY ADMINISTRATION.........	11,966	-	-	-	-	-	-	11,966	-
DEPARTMENT OF HOUSING & URBAN DEVELOP..	7,097	-	-	-	-	-	7,097	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	71,769	11,830	58	5,553	14,387	1,065	37,579	1,144	153
BONNEVILLE POWER ADMINISTRATION........	524	-	-	25	31	20	448	-	-
BUREAU OF LAND MANAGEMENT..............	695	635	-	-	-	-	-	60	-
BUREAU OF MINES........................	27,646	-	-	3.342	1,648	451	22,205	-	-
BUREAU OF OUTDOOR RECREATION...........	92	-	-	-	-	-	-	92	-
BUREAU OF RECLAMATION..................	7,120	13	-	-	4,810	-	2,255	42	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	9,582	9,582	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	10,296	-	-	1,946	6,602	374	1,374	-	-
OFFICE OF COAL RESEARCH................	2,341	-	-	-	-	-	2,341	-	-
OFFICE OF SALINE WATER.................	5,001	-	-	-	-	-	5,001	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	8,472	1,600	58	240	1,296	220	3,955	950	153
DEPARTMENT OF JUSTICE, TOTAL...........	5,334	326	1,239	630	-	240	363	2,536	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	839	326	114	-	-	-	-	399	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	4,495	-	1,125	630	-	240	363	2,137	-
DEPARTMENT OF LABOR, TOTAL.............	9,234	-	-	-	-	-	-	9,234	-
BUREAU OF LABOR STATISTICS.............	1,144	-	-	-	-	-	-	1,144	-
MANPOWER ADMINISTRATION................	5,874	-	-	-	-	-	-	5,874	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,216	-	-	-	-	-	-	2,216	-
POSTAL SERVICE.........................	4,577	-	-	-	-	-	-	-	4,577

TABLE C-52. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1970

CONTINUED (THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOL-OGY	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATHE-MATICS	ENGI-NEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
DEPARTMENT OF STATE, TOTAL.............	18,895	14,421	143	-	-	-	1,392	2,939	-
DEPARTMENTAL FUNDS......................	125	-	-	-	-	-	-	125	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	18,627	14,421	-	-	-	-	1,392	2,814	-
PEACE CORPS............................	143	-	143	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	67,164	3,145	3,691	32	4,249	2,364	42,516	10,442	725
FEDERAL AVIATION ADMINISTRATION........	9,960	1,484	395	-	400	350	7,331	-	-
FEDERAL HIGHWAY ADMINISTRATION.........	21,218	-	-	-	-	-	20,157	1,061	-
FEDERAL RAILROAD ADMINISTRATION........	4,743	-	-	-	-	400	4,020	323	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	14,765	1,651	3,286	-	-	1,554	7,166	1,108	-
OFFICE OF THE SECRETARY................	8,956	-	-	-	249	-	1,902	6,805	-
UNITED STATES COAST GUARD..............	2,801	10	-	32	2,164	-	595	-	-
URBAN MASS TRANSPORTATION ADMIN........	4,721	-	10	-	1,436	60	1,345	1,145	725
DEPARTMENT OF THE TREASURY, TOTAL......	286	-	-	270	-	-	16	-	-
BUREAU OF ENGRAVING AND PRINTING.......	286	-	-	270	-	-	16	-	-
OTHER AGENCIES									
ADVISORY COMM ON INTERGOVT RELATIONS...	553	-	-	-	-	-	-	553	-
ATOMIC ENERGY COMMISSION...............	146,448	43,120	-	69,312	9,462	-	24,554	-	-
CIVIL AERONAUTICS BOARD................	263	-	-	-	-	-	-	263	-
CIVIL SERVICE COMMISSION...............	196	-	196	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	47,534	17,057	8	5,929	4,240	193	19,586	521	-
FEDERAL COMMUNICATIONS COMMISSION......	1,015	-	-	-	-	-	1,015	-	-
FEDERAL HOME LOAN BANK BOARD...........	390	-	-	-	-	-	-	390	-
FEDERAL TRADE COMMISSION...............	388	-	-	-	-	-	-	388	-
GENERAL SERVICES ADMINISTRATION........	215	-	-	-	-	-	194	-	21
LIBRARY OF CONGRESS....................	968	-	-	-	-	-	-	-	968
NATIONAL AERONAUTICS & SPACE ADMIN.....	772,698	27,720	810	27,397	102,411	-	614,360	-	-
NATIONAL SCIENCE FOUNDATION............	29,812	7,457	120	1,627	6,239	100	4,258	5,348	4,663
OFFICE OF ECONOMIC OPPORTUNITY.........	27,800	2,600	5,000	-	-	-	-	20,200	-
OFFICE OF EMERGENCY PREPAREDNESS.......	1,016	-	-	-	-	-	531	-	485
OFFICE OF SCIENCE AND TECHNOLOGY.......	557	170	6	142	50	11	167	11	-
SMALL BUSINESS ADMINISTRATION..........	101	-	-	-	-	-	-	101	-
TENNESSEE VALLEY AUTHORITY.............	6,376	1,727	-	890	-	-	3,406	353	-
US ARMS CONTROL & DISARMAMENT AGENCY...	3,732	-	-	303	40	-	2,811	395	183
UNITED STATES INFORMATION AGENCY.......	157	-	-	-	-	-	157	-	-
VETERANS ADMINISTRATION................	52,502	47,622	3,800	600	-	60	275	145	-

TABLE C-53. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOLOGY	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATHEMATICS	ENGINEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
TOTAL, ALL AGENCIES....................	3,830,092	1,103,977	65,016	299,931	270,532	50,855	1,774,211	191,573	73,997
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	169,830	99,211	26	20,817	3,514	385	20,377	25,241	259
AGRICULTURAL RESEARCH SERVICE..........	86,420	53,726	26	16,962	618	235	13,917	936	-
COOPERATIVE STATE RESEARCH SERVICE.....	41,539	28,574	-	2,077	230	-	1,423	9,235	-
ECONOMIC RESEARCH SERVICE..............	11,138	-	-	-	-	-	-	11,138	-
FARMER COOPERATIVE SERVICE.............	709	-	-	-	-	-	-	709	-
FOREST SERVICE.........................	29,355	16,911	-	1,778	2,666	-	5,037	2,963	-
NATIONAL AGRICULTURAL LIBRARY..........	259	-	-	-	-	-	-	-	259
STATISTICAL REPORTING SERVICE..........	410	-	-	-	-	150	-	260	-
DEPARTMENT OF COMMERCE, TOTAL..........	78,416	22,948	1,024	6,231	14,024	894	25,882	4,906	2,507
BUREAU OF THE CENSUS...................	1,759	-	599	-	-	111	-	1,049	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	1,844	-	-	-	-	-	-	1,844	-
MARITIME ADMINISTRATION................	17,493	-	-	-	-	-	15,905	1,588	-
NATIONAL BUREAU OF STANDARDS...........	13,884	-	-	4,956	-	783	6,943	-	1,202
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	42,497	22,948	425	1,275	14,024	-	2,550	425	850
OFFICE OF TELECOMMUNICATIONS...........	484	-	-	-	-	-	484	-	-
PATENT OFFICE..........................	455	-	-	-	-	-	-	-	455
DEPARTMENT OF DEFENSE, TOTAL...........	1,236,296	65,211	18,518	132,774	76,766	39,522	861,585	2,436	39,484
DEPARTMENT OF THE ARMY.................	209,661	28,938	4,755	40,956	8,250	3,378	108,026	1,746	13,612
DEPARTMENT OF THE NAVY.................	182,960	5,928	2,118	38,258	14,682	22,112	99,401	-	461
DEPARTMENT OF THE AIR FORCE............	564,000	24,801	10,180	2,832	6,360	594	519,233	-	-
DEFENSE AGENCIES.......................	276,123	5,074	1,173	50,128	47,474	13,090	134,036	240	24,908
DEPARTMENTWIDE FUNDS...................	3,552	470	292	600	-	348	889	450	503
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	910,400	712,876	31,506	23,068	564	6,244	24,530	94,230	17,382
FOOD AND DRUG ADMINISTRATION...........	25,922	16,174	-	9,748	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	122,575	91,361	15,730	-	-	635	66	13,377	1,406
NATIONAL INSTITUTES OF HEALTH..........	658,338	592,011	6,226	13,320	564	5,609	24,314	318	15,976
OFFICE OF CHILD DEVELOPMENT............	2,000	500	500	-	-	-	-	1,000	-
OFFICE OF EDUCATION....................	56,283	-	5,975	-	-	-	-	50,308	-
SOCIAL AND REHABILITATION SERVICE......	32,200	12,830	3,075	-	-	-	150	16,145	-
SOCIAL SECURITY ADMINISTRATION.........	13,082	-	-	-	-	-	-	13,082	-
DEPARTMENT OF HOUSING & URBAN DEVELOP..	11,862	-	-	-	-	-	11,862	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	83,904	13,135	62	5,722	19,397	1,452	42,604	1,353	179
BONNEVILLE POWER ADMINISTRATION........	474	-	-	27	46	20	381	-	-
BUREAU OF LAND MANAGEMENT..............	755	698	-	-	-	-	-	57	-
BUREAU OF MINES........................	31,599	-	-	3,383	2,334	743	25,139	-	-
BUREAU OF OUTDOOR RECREATION...........	133	-	-	-	-	-	-	133	-
BUREAU OF RECLAMATION..................	8,974	10	-	-	6,525	-	2,374	65	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	10,581	10,581	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	12,815	-	-	2,037	8,996	391	1,391	-	-
OFFICE OF COAL RESEARCH................	4,809	-	-	-	-	-	4,809	-	-
OFFICE OF SALINE WATER.................	3,400	-	-	-	-	-	3,400	-	-
OFFICE OF THE SECRETARY................	583	-	-	-	-	-	583	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	9,781	1,846	62	275	1,496	298	4,527	1,098	179
DEPARTMENT OF JUSTICE, TOTAL...........	6,210	778	1,191	719	-	295	363	2,864	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	1,560	778	16	39	-	-	-	727	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	4,650	-	1,175	680	-	295	363	2,137	-
DEPARTMENT OF LABOR, TOTAL.............	9,917	-	-	-	-	-	-	9,917	-
[illegible]	[illegible]	-	-	-	-	-	-	1,154	-

TABLE C-53. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOLOGY	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATHEMATICS	ENGINEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
POSTAL SERVICE..........................	5,568	-	-	-	-	-	-	-	5,568
DEPARTMENT OF STATE, TOTAL............	25,359	18,731	103	-	60	-	1,210	5,255	-
DEPARTMENTAL FUNDS.....................	350	-	-	-	-	-	-	350	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	24,906	18,731	-	-	60	-	1,210	4,905	-
PEACE CORPS............................	103	-	103	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	90,288	3,127	2,727	95	4,150	1,498	67,770	10,711	210
FEDERAL AVIATION ADMINISTRATION........	23,018	1,667	443	-	768	500	19,640	-	-
FEDERAL HIGHWAY ADMINISTRATION.........	21,005	-	-	-	-	-	19,892	1,113	-
FEDERAL RAILROAD ADMINISTRATION........	9,846	310	215	-	-	-	5,986	3,335	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	11,972	1,150	2,059	-	-	848	7,840	75	-
OFFICE OF THE SECRETARY................	15,594	-	-	-	694	-	10,000	4,900	-
UNITED STATES COAST GUARD..............	4,389	-	-	95	2,638	-	1,656	-	-
URBAN MASS TRANSPORTATION ADMIN........	4,464	-	10	-	50	150	2,756	1,288	210
DEPARTMENT OF THE TREASURY, TOTAL......	373	-	-	355	-	-	18	-	-
BUREAU OF ENGRAVING AND PRINTING.......	373	-	-	355	-	-	18	-	-
OTHER AGENCIES									
ADVISORY COMM ON INTERGOVT RELATIONS...	477	-	-	-	-	-	-	477	-
ATOMIC ENERGY COMMISSION...............	145,297	43,102	-	68,376	9,298	-	24,521	-	-
CIVIL AERONAUTICS BOARD................	270	-	-	-	-	-	-	270	-
CIVIL SERVICE COMMISSION...............	221	-	221	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	55,541	18,888	7	7,013	5,044	274	23,651	664	-
FEDERAL COMMUNICATIONS COMMISSION......	638	-	-	-	-	-	638	-	-
FEDERAL HOME LOAN BANK BOARD...........	388	-	-	-	-	-	-	388	-
FEDERAL TRADE COMMISSION...............	467	-	-	-	-	-	-	467	-
GENERAL SERVICES ADMINISTRATION........	83	-	-	-	-	-	63	-	20
LIBRARY OF CONGRESS....................	1,006	-	-	-	-	-	-	-	1,006
NATIONAL AERONAUTICS & SPACE ADMIN.....	851,515	35,890	549	31,148	129,562	-	654,366	-	-
NATIONAL SCIENCE FOUNDATION............	42,150	10,765	175	1,635	8,054	220	8,208	6,370	6,723
OFFICE OF ECONOMIC OPPORTUNITY.........	36,750	6,900	5,000	-	-	-	-	24,850	-
OFFICE OF EMERGENCY PREPAREDNESS.......	995	-	-	-	-	-	498	-	497
OFFICE OF SCIENCE AND TECHNOLOGY.......	594	182	7	152	53	11	178	11	-
TENNESSEE VALLEY AUTHORITY.............	7,478	1,949	-	976	-	-	4,125	428	-
US ARMS CONTROL & DISARMAMENT AGENCY...	2,335	-	-	225	46	-	1,317	585	162
UNITED STATES INFORMATION AGENCY.......	160	-	-	-	-	-	160	-	-
VETERANS ADMINISTRATION................	55,304	50,284	3,900	625	-	60	285	150	-

TABLE C-54. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOL-OGY	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATHE-MATICS	ENGI-NEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
TOTAL, ALL AGENCIES.....................	4,244,480	1,209,762	74,436	356,497	282,734	53,576	1,949,663	211,167	106,645
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	175,885	103,899	26	21,232	3,550	384	20,565	25,966	263
AGRICULTURAL RESEARCH SERVICE...........	88,290	55,338	26	17,172	619	234	13,964	937	-
COOPERATIVE STATE RESEARCH SERVICE.....	45,633	31,377	-	2,282	265	-	1,564	10,145	-
ECONOMIC RESEARCH SERVICE...............	10,954	-	-	-	-	-	-	10,954	-
FARMER COOPERATIVE SERVICE..............	707	-	-	-	-	-	-	707	-
FOREST SERVICE..........................	29,628	17,184	-	1,778	2,666	-	5,037	2,963	-
NATIONAL AGRICULTURAL LIBRARY...........	263	-	-	-	-	-	-	-	263
STATISTICAL REPORTING SERVICE...........	410	-	-	-	-	150	-	260	-
DEPARTMENT OF COMMERCE, TOTAL..........	86,042	27,772	982	6,834	16,972	894	26,065	3,574	2,949
BUREAU OF THE CENSUS....................	1,498	-	468	-	-	112	-	918	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	1,591	-	-	-	-	-	-	1,591	-
MARITIME ADMINISTRATION.................	14,445	-	-	-	-	-	13,895	550	-
NATIONAL BUREAU OF STANDARDS............	15,139	-	-	5,291	-	782	7,615	-	1,451
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	51,430	27,772	514	1,543	16,972	-	3,086	515	1,028
OFFICE OF TELECOMMUNICATIONS............	1,469	-	-	-	-	-	1,469	-	-
PATENT OFFICE...........................	470	-	-	-	-	-	-	-	470
DEPARTMENT OF DEFENSE, TOTAL...........	1,388,076	71,733	25,625	155,416	74,634	39,788	957,306	6,317	57,257
DEPARTMENT OF THE ARMY..................	233,789	30,402	9,137	44,691	8,731	3,027	119,791	5,500	12,510
DEPARTMENT OF THE NAVY..................	203,253	8,285	3,370	43,834	16,078	25,029	106,657	-	-
DEPARTMENT OF THE AIR FORCE.............	617,000	27,818	12,289	2,582	6,651	409	567,251	-	-
DEFENSE AGENCIES........................	330,334	4,739	525	63,685	43,174	10,955	162,682	350	44,224
DEPARTMENTWIDE FUNDS....................	3,700	489	304	624	-	368	925	467	523
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	1,001,916	798,855	33,921	27,222	644	6,796	27,894	86,488	20,096
FOOD AND DRUG ADMINISTRATION............	33,916	21,909	-	12,007	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	119,681	87,234	17,411	-	-	389	44	12,679	1,924
NATIONAL INSTITUTES OF HEALTH...........	747,085	671,512	7,022	15,215	644	6,407	27,750	363	18,172
OFFICE OF CHILD DEVELOPMENT.............	3,500	1,000	500	-	-	-	-	2,000	-
OFFICE OF EDUCATION.....................	51,998	-	6,568	-	-	-	-	45,430	-
SOCIAL AND REHABILITATION SERVICE......	31,930	17,200	2,420	-	-	-	100	12,210	-
SOCIAL SECURITY ADMINISTRATION..........	13,806	-	-	-	-	-	-	13,806	-
DEPARTMENT OF HOUSING & URBAN DEVELOP..	12,740	-	-	-	-	-	12,740	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	91,252	14,172	68	5,748	22,745	1,254	45,693	1,378	194
BONNEVILLE POWER ADMINISTRATION.........	495	-	-	44	-	20	431	-	-
BUREAU OF LAND MANAGEMENT...............	793	735	-	-	-	-	-	58	-
BUREAU OF MINES.........................	31,855	-	-	3,270	772	499	27,314	-	-
BUREAU OF OUTDOOR RECREATION............	76	-	-	-	-	-	-	76	-
BUREAU OF RECLAMATION...................	9,493	5	-	-	6,700	-	2,708	80	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	11,446	11,446	-	-	-	-	-	-	-
GEOLOGICAL SURVEY.......................	17,506	-	-	2,134	13,502	410	1,460	-	-
OFFICE OF COAL RESEARCH.................	4,059	-	-	-	-	-	4,059	-	-
OFFICE OF SALINE WATER..................	3,775	-	-	-	-	-	3,775	-	-
OFFICE OF THE SECRETARY.................	1,193	-	-	-	140	-	1,053	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	10,561	1,986	68	300	1,631	325	4,893	1,164	194
DEPARTMENT OF JUSTICE, TOTAL...........	15,162	1,399	2,115	2,864	-	1,648	1,990	5,146	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	2,162	1,399	-	254	-	38	-	471	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	13,000	-	2,115	2,610	-	1,610	1,990	4,675	-
DEPARTMENT OF LABOR, TOTAL.............	9,930	-	-	-	-	-	-	9,930	-
BUREAU OF LABOR STATISTICS..............	1,154	-	-	-	-	-	-	1,154	-
MANPOWER ADMINISTRATION.................	6,243	-	-	-	-	-	-	6,243	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,533	-	-	-	-	-	-	2,533	-

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TABLE C-54. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	LIFE SCIENCES	PSYCHOL-OGY	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATHE-MATICS	ENGI-NEERING	SOCIAL SCIENCES	OTHER SCIENCES NEC
POSTAL SERVICE........................	5,860	-	-	-	-	-	-	-	5,860
DEPARTMENT OF STATE, TOTAL............	28,204	19,219	-	-	200	-	1,705	7,080	-
DEPARTMENTAL FUNDS....................	650	-	-	-	-	-	-	650	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	27,554	19,219	-	-	200	-	1,705	6,430	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	161,000	4,805	5,240	825	7,755	2,192	123,865	16,318	-
FEDERAL AVIATION ADMINISTRATION........	60,371	1,805	480	-	3,000	500	54,586	-	-
FEDERAL HIGHWAY ADMINISTRATION.........	24,584	-	-	-	-	-	23,284	1,300	-
FEDERAL RAILROAD ADMINISTRATION........	10,500	500	250	-	-	-	5,765	3,985	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	21,050	2,500	4,500	-	-	1,300	12,750	-	-
OFFICE OF THE SECRETARY................	31,000	-	-	-	675	-	20,750	9,575	-
UNITED STATES COAST GUARD..............	8,585	-	-	825	3,030	-	4,730	-	-
URBAN MASS TRANSPORTATION ADMIN........	4,910	-	10	-	1,050	392	2,000	1,458	-
DEPARTMENT OF THE TREASURY, TOTAL......	3[illegible]	[illegible]	-	372	-	-	18	-	-
BUREAU OF ENGRAVING AND PRINTING.......	390	[illegible]	-	372	-	-	18	-	-
OTHER AGENCIES									
ADVISORY COMM ON INTERGOVT RELATIONS...	487	-	-	-	-	-	-	487	-
ATOMIC ENERGY COMMISSION...............	145,025	43,367	-	67,658	9,580	-	24,420	-	-
CIVIL AERONAUTICS BOARD................	331	-	-	-	-	-	-	331	-
CIVIL SERVICE COMMISSION...............	237	-	237	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	70,302	22,656	7	8,265	6,310	347	31,911	806	-
FEDERAL COMMUNICATIONS COMMISSION......	869	-	-	-	-	-	869	-	-
FEDERAL HOME LOAN BANK BOARD...........	497	-	-	-	-	-	-	497	-
FEDERAL TRADE COMMISSION...............	460	-	-	-	-	-	-	460	-
GENERAL SERVICES ADMINISTRATION........	20	-	-	-	-	-	-	-	20
LIBRARY OF CONGRESS....................	1,175	-	-	-	-	-	-	-	1,175
NATIONAL AERONAUTICS & SPACE ADMIN.....	873,546	35,457	1,988	54,938	127,802	-	653,361	-	-
NATIONAL SCIENCE FOUNDATION............	70,400	12,880	320	3,100	12,440	200	14,550	8,802	18,108
OFFICE OF ECONOMIC OPPORTUNITY.........	37,100	900	-	-	-	-	-	36,200	-
OFFICE OF EMERGENCY PREPAREDNESS.......	535	-	-	-	-	-	-	-	535
OFFICE OF SCIENCE AND TECHNOLOGY.......	648	198	7	166	58	13	194	12	-
SMALL BUSINESS ADMINISTRATION..........	205	-	-	-	-	-	-	205	-
TENNESSEE VALLEY AUTHORITY.............	8,197	2,051	-	1,075	-	-	4,685	386	-
US ARMS CONTROL & DISARMAMENT AGENCY...	2,420	-	-	157	44	-	1,397	634	188
UNITED STATES INFORMATION AGENCY.......	150	-	-	-	-	-	150	-	-
VETERANS ADMINISTRATION................	55,419	50,399	3,900	625	-	60	285	150	-

TABLE C-55. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	PSYCHOLOGY				PHYSICAL SCIENCES				
	TOTAL	BIOLOGICAL ASPECTS	SOCIAL ASPECTS	PSYCHOLOGICAL SCIENCES NEC	TOTAL	ASTRONOMY	CHEMISTRY	PHYSICS	PHYSICAL SCIENCES NEC
TOTAL, ALL AGENCIES	56,091	15,605	39,454	1,032	305,997	7,068	100,788	185,379	12,762
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL	27	-	27	-	19,112	-	14,880	4,232	-
AGRICULTURAL RESEARCH SERVICE	27	-	27	-	15,576	-	12,166	3,410	-
COOPERATIVE STATE RESEARCH SERVICE	-	-	-	-	1,893	-	1,893	-	-
FOREST SERVICE	-	-	-	-	1,643	-	821	822	-
DEPARTMENT OF COMMERCE, TOTAL	777	319	458	-	5,646	-	3,288	2,352	6
BUREAU OF THE CENSUS	458	-	458	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS	-	-	-	-	4,690	-	2,332	2,352	6
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	319	319	-	-	956	-	956	-	-
DEPARTMENT OF DEFENSE, TOTAL	15,112	3,424	10,859	829	151,228	1,013	28,078	111,143	10,994
DEPARTMENT OF THE ARMY	6,064	2,914	3,150	-	52,840	8	22,885	23,287	6,660
DEPARTMENT OF THE NAVY	2,311	-	2,311	-	38,491	244	3,544	31,664	3,039
DEPARTMENT OF THE AIR FORCE	5,625	475	5,150	-	2,934	615	1,221	1,098	-
DEFENSE AGENCIES	829	-	-	829	56,282	146	408	54,433	1,295
DEPARTMENTWIDE FUNDS	283	35	248	-	681	-	20	661	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	25,104	6,956	17,945	203	17,326	-	16,849	45	432
FOOD AND DRUG ADMINISTRATION	-	-	-	-	6,313	-	6,313	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN.	13,297	4,120	9,079	98	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH	5,309	2,836	2,473	-	11,013	-	10,536	45	432
OFFICE OF EDUCATION	4,525	-	4,420	105	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE	1,973	-	1,973	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL	58	-	58	-	5,553	-	4,928	625	-
BONNEVILLE POWER ADMINISTRATION	-	-	-	-	25	-	-	25	-
BUREAU OF MINES	-	-	-	-	3,342	-	3,121	221	-
GEOLOGICAL SURVEY	-	-	-	-	1,946	-	1,572	374	-
OFFICE OF WATER RESOURCES RESEARCH	58	-	58	-	240	-	235	5	-
DEPARTMENT OF JUSTICE, TOTAL	1,239	-	1,239	-	630	-	-	630	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	114	-	114	-	-	-	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.	1,125	-	1,125	-	630	-	-	630	-
DEPARTMENT OF STATE, TOTAL	143	-	143	-	-	-	-	-	-
PEACE CORPS	143	-	143	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL	3,691	395	3,296	-	32	-	-	32	-
FEDERAL AVIATION ADMINISTRATION	395	395	-	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.	3,286	-	3,286	-	-	-	-	-	-
UNITED STATES COAST GUARD	-	-	-	-	32	-	-	32	-
URBAN MASS TRANSPORTATION ADMIN.	10	-	10	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL	-	-	-	-	270	-	70	40	160
BUREAU OF ENGRAVING AND PRINTING	-	-	-	-	270	-	70	40	160
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION	-	-	-	-	69,312	-	25,202	44,110	-
CIVIL SERVICE COMMISSION	196	-	196	-	-	-			

BUREAU OF THE CENSUS	458		458						
NATIONAL BUREAU OF STANDARDS	-	-	-	-	4,690	-	2,332	2,352	6
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	319	319	-	-	956	-	956	-	-
DEPARTMENT OF DEFENSE, TOTAL	15,112	3,424	10,859	829	151,228	1,013	28,078	111,143	10,994
DEPARTMENT OF THE ARMY	6,064	2,914	3,150	-	52,840	8	22,885	23,287	6,660
DEPARTMENT OF THE NAVY	2,311	-	2,311	-	38,491	244	3,544	31,664	3,039
DEPARTMENT OF THE AIR FORCE	5,625	475	5,150	-	2,934	615	1,221	1,098	-
DEFENSE AGENCIES	829	-	-	829	56,282	146	408	54,433	1,295
DEPARTMENTWIDE FUNDS	283	35	248	-	681	-	20	661	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	25,104	6,956	17,945	203	17,326	-	16,849	45	432
FOOD AND DRUG ADMINISTRATION	-	-	-	-	6,313	-	6,313	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN.	13,297	4,120	9,079	98	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH	5,309	2,836	2,473	-	11,013	-	10,536	45	432
OFFICE OF EDUCATION	4,525	-	4,420	105	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE	1,973	-	1,973	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL	58	-	58	-	5,553	-	4,928	625	-
BONNEVILLE POWER ADMINISTRATION	-	-	-	-	25	-	-	25	-
BUREAU OF MINES	-	-	-	-	3,342	-	3,121	221	-
GEOLOGICAL SURVEY	-	-	-	-	1,946	-	1,572	374	-
OFFICE OF WATER RESOURCES RESEARCH	58	-	58	-	240	-	235	5	-
DEPARTMENT OF JUSTICE, TOTAL	1,239	-	1,239	-	630	-	-	630	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	114	-	114	-	-	-	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.	1,125	-	1,125	-	630	-	-	630	-
DEPARTMENT OF STATE, TOTAL	143	-	143	-	-	-	-	-	-
PEACE CORPS	143	-	143	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL	3,691	395	3,296	-	32	-	-	32	-
FEDERAL AVIATION ADMINISTRATION	395	395	-	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.	3,286	-	3,286	-	-	-	-	-	-
UNITED STATES COAST GUARD	-	-	-	-	32	-	-	32	-
URBAN MASS TRANSPORTATION ADMIN.	10	-	10	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL	-	-	-	-	270	-	70	40	160
BUREAU OF ENGRAVING AND PRINTING	-	-	-	-	270	-	70	40	160
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION	-	-	-	-	69,312	-	25,202	44,110	-
CIVIL SERVICE COMMISSION	196	-	196	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY	8	8	-	-	5,929	-	3,849	1,144	936
NATIONAL AERONAUTICS & SPACE ADMIN.	810	810	-	-	27,397	6,046	1,556	19,795	-
NATIONAL SCIENCE FOUNDATION	120	90	30	-	1,627	-	500	893	234
OFFICE OF ECONOMIC OPPORTUNITY	5,000	-	5,000	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY	6	3	3	-	142	9	45	88	-
TENNESSEE VALLEY AUTHORITY	-	-	-	-	890	-	890	-	-
US ARMS CONTROL & DISARMAMENT AGENCY	-	-	-	-	303	-	303	-	-
VETERANS ADMINISTRATION	3,800	3,600	200	-	600	-	350	250	-

TABLE C-56. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	PSYCHOLOGY				PHYSICAL SCIENCES				
	TOTAL	BIOLOGICAL ASPECTS	SOCIAL ASPECTS	PSYCHOLOGICAL SCIENCES NEC	TOTAL	ASTRONOMY	CHEMISTRY	PHYSICS	PHYSICAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	65,016	15,955	47,052	2,009	299,931	8,376	101,576	177,856	12,123
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	26	-	26	-	20,817	-	16,337	4,480	-
AGRICULTURAL RESEARCH SERVICE..........	26	-	26	-	16,962	-	13,371	3,591	-
COOPERATIVE STATE RESEARCH SERVICE.....	-	-	-	-	2,077	-	2,077	-	-
FOREST SERVICE.........................	-	-	-	-	1,778	-	889	889	-
DEPARTMENT OF COMMERCE, TOTAL..........	1,024	425	599	-	6,231	-	3,678	2,546	7
BUREAU OF THE CENSUS...................	599	-	599	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	-	-	-	-	4,956	-	2,403	2,546	7
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	425	425	-	-	1,275	-	1,275	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	18,518	2,569	14,871	1,078	132,774	1,364	20,643	100,718	10,049
DEPARTMENT OF THE ARMY.................	4,755	1,874	2,881	-	40,956	140	15,677	19,378	5,761
DEPARTMENT OF THE NAVY.................	2,118	-	2,118	-	38,258	631	3,166	31,563	2,898
DEPARTMENT OF THE AIR FORCE............	10,180	570	9,610	-	2,832	493	1,459	880	-
DEFENSE AGENCIES.......................	1,173	95	-	1,078	50,128	100	335	48,303	1,390
DEPARTMENTWIDE FUNDS...................	292	30	262	-	600	-	6	594	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	31,506	8,123	22,452	931	23,068	-	22,493	56	519
FOOD AND DRUG ADMINISTRATION...........	-	-	-	-	9,748	-	9,748	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	15,730	4,695	10,164	871	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	6,226	3,428	2,798	-	13,320	-	12,745	56	519
OFFICE OF CHILD DEVELOPMENT............	500	-	500	-	-	-	-	-	-
OFFICE OF EDUCATION....................	5,975	-	5,915	60	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	3,075	-	3,075	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	62	-	62	-	5,722	-	5,051	671	-
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	27	-	-	27	-
BUREAU OF MINES........................	-	-	-	-	3,383	-	3,137	246	-
GEOLOGICAL SURVEY......................	-	-	-	-	2,037	-	1,646	391	-
OFFICE OF WATER RESOURCES RESEARCH.....	62	-	62	-	275	-	268	7	-
DEPARTMENT OF JUSTICE, TOTAL...........	1,191	-	1,191	-	719	-	39	680	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	16	-	16	-	39	-	39	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	1,175	-	1,175	-	680	-	-	680	-
DEPARTMENT OF STATE, TOTAL.............	103	-	103	-	-	-	-	-	-
PEACE CORPS............................	103	-	103	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	2,727	443	2,284	-	95	-	-	95	-
FEDERAL AVIATION ADMINISTRATION........	443	443	-	-	-	-	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	215	-	215	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	2,059	-	2,059	-	-	-	-	-	-
UNITED STATES COAST GUARD..............	-	-	-	-	-	-	-	-	-

COOPERATIVE STATE RESEARCH SERVICE.....	-	-	-	-	2,077	-	2,077	-	-
FOREST SERVICE..........................	-	-	-	-	1,778	-	889	889	-
DEPARTMENT OF COMMERCE, TOTAL..........	1,024	425	599	-	6,231	-	3,678	2,546	7
BUREAU OF THE CENSUS...................	599	-	599	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	-	-	-	-	4,956	-	2,403	2,546	7
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	425	425	-	-	1,275	-	1,275	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	18,518	2,569	14,871	1,078	132,774	1,364	20,643	100,718	10,049
DEPARTMENT OF THE ARMY.................	4,755	1,874	2,881	-	40,956	140	15,677	19,378	5,761
DEPARTMENT OF THE NAVY.................	2,118	-	2,118	-	38,258	631	3,166	31,563	2,898
DEPARTMENT OF THE AIR FORCE............	10,180	570	9,610	-	2,832	493	1,459	880	-
DEFENSE AGENCIES.......................	1,173	95	-	1,078	50,128	100	335	48,303	1,390
DEPARTMENTWIDE FUNDS...................	292	30	262	-	600	-	6	594	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	31,506	8,123	22,452	931	23,068	-	22,493	56	519
FOOD AND DRUG ADMINISTRATION...........	-	-	-	-	9,748	-	9,748	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	15,730	4,695	10,164	871	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	6,226	3,428	2,798	-	13,320	-	12,745	56	519
OFFICE OF CHILD DEVELOPMENT............	500	-	500	-	-	-	-	-	-
OFFICE OF EDUCATION....................	5,975	-	5,915	60	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	3,075	-	3,075	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	62	-	62	-	5,722	-	5,051	671	-
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	27	-	-	27	-
BUREAU OF MINES........................	-	-	-	-	3,383	-	3,137	246	-
GEOLOGICAL SURVEY......................	-	-	-	-	2,037	-	1,646	391	-
OFFICE OF WATER RESOURCES RESEARCH.....	62	-	62	-	275	-	268	7	-
DEPARTMENT OF JUSTICE, TOTAL...........	1,191	-	1,191	-	719	-	39	680	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	16	-	16	-	39	-	39	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	1,175	-	1,175	-	680	-	-	680	-
DEPARTMENT OF STATE, TOTAL.............	103	-	103	-	-	-	-	-	-
PEACE CORPS............................	103	-	103	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	2,727	443	2,284	-	95	-	-	95	-
FEDERAL AVIATION ADMINISTRATION........	443	443	-	-	-	-	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	215	-	215	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	2,059	-	2,059	-	-	-	-	-	-
UNITED STATES COAST GUARD..............	-	-	-	-	95	-	-	95	-
URBAN MASS TRANSPORTATION ADMIN........	10	-	10	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL......	-	-	-	-	355	-	90	50	215
BUREAU OF ENGRAVING AND PRINTING.......	-	-	-	-	355	-	90	50	215
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	-	-	-	-	68,376	-	24,418	43,958	-
CIVIL SERVICE COMMISSION...............	221	-	221	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	7	7	-	-	7,013	-	4,655	1,025	1,333
NATIONAL AERONAUTICS & SPACE ADMIN.....	549	549	-	-	31,148	7,002	1,813	22,333	-
NATIONAL SCIENCE FOUNDATION............	175	135	40	-	1,635	-	735	900	-
OFFICE OF ECONOMIC OPPORTUNITY.........	5,000	-	5,000	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	7	4	3	-	152	10	48	94	-
TENNESSEE VALLEY AUTHORITY.............	-	-	-	-	976	-	976	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	-	-	-	-	225	-	225	-	-
VETERANS ADMINISTRATION................	3,900	3,700	200	-	625	-	375	250	-

TABLE C-57. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	PSYCHOLOGY				PHYSICAL SCIENCES				
	TOTAL	BIOLOGICAL ASPECTS	SOCIAL ASPECTS	PSYCHOLOGICAL SCIENCES NEC	TOTAL	ASTRONOMY	CHEMISTRY	PHYSICS	PHYSICAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	74,436	21,854	51,031	1,551	356,497	10,030	117,210	216,203	13,054
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	26	-	26	-	21,232	-	16,757	4,475	-
AGRICULTURAL RESEARCH SERVICE..........	26	-	26	-	17,172	-	13,586	3,586	-
COOPERATIVE STATE RESEARCH SERVICE.....	-	-	-	-	2,282	-	2,282	-	-
FOREST SERVICE.........................	-	-	-	-	1,778	-	889	889	-
DEPARTMENT OF COMMERCE, TOTAL..........	982	514	468	-	6,834	-	4,117	2,710	7
BUREAU OF THE CENSUS...................	468	-	468	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	-	-	-	-	5,291	-	2,574	2,710	7
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	514	514	-	-	1,543	-	1,543	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	25,625	3,988	21,112	525	155,416	1,019	25,097	118,855	10,445
DEPARTMENT OF THE ARMY.................	9,137	3,573	5,564	-	44,691	11	19,482	19,278	5,920
DEPARTMENT OF THE NAVY.................	3,370	-	3,370	-	43,834	492	3,914	36,538	2,890
DEPARTMENT OF THE AIR FORCE............	12,289	384	11,905	-	2,582	516	1,145	921	-
DEFENSE AGENCIES.......................	525	-	-	525	63,685	-	550	61,500	1,635
DEPARTMENTWIDE FUNDS...................	304	31	273	-	624	-	6	618	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	33,921	11,013	21,982	926	27,222	-	26,566	64	592
FOOD AND DRUG ADMINISTRATION...........	-	-	-	-	12,007	-	12,007	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	17,411	7,105	9,380	926	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	7,022	3,908	3,114	-	15,215	-	14,559	64	592
OFFICE OF CHILD DEVELOPMENT............	500	-	500	-	-	-	-	-	-
OFFICE OF EDUCATION....................	6,568	-	6,568	-	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	2,420	-	2,420	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	68	-	68	-	5,748	-	5,024	724	-
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	44	-	-	44	-
BUREAU OF MINES........................	-	-	-	-	3,270	-	3,009	261	-
GEOLOGICAL SURVEY......................	-	-	-	-	2,134	-	1,724	410	-
OFFICE OF WATER RESOURCES RESEARCH.....	68	-	68	-	300	-	291	9	-
DEPARTMENT OF JUSTICE, TOTAL...........	2,115	-	2,115	-	2,864	-	254	2,610	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	-	-	-	-	254	-	254	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	2,115	-	2,115	-	2,610	-	-	2,610	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	5,240	480	4,760	-	825	-	-	825	-
FEDERAL AVIATION ADMINISTRATION........	480	480	-	-	-	-	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	250	-	250	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	4,500	-	4,500	-	-	-	-	-	-
UNITED STATES COAST GUARD..............	-	-	-	-	825	-	-	825	-
URBAN MASS TRANSPORTATION ADMIN........	10	-	10	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL......	-	-	-	-	372	-	95	55	222
BUREAU OF ENGRAVING AND PRINTING.......	-	-	-	-	372	-	95	55	222
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	-	-	-	-	67,658	-	24,698	42,960	-
CIVIL SERVICE COMMISSION...............	237	-	237	-	-	-	-	-	-
					8,265	-	5,538	1,039	1,688

TABLE C-58. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN LIFE AND ENVIRONMENTAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	LIFE SCIENCES					ENVIRONMENTAL SCIENCES				
	TOTAL	BIO-LOGICAL	CLINICAL MEDICAL	OTHER MEDICAL SCIENCES	LIFE SCIENCES NEC	TOTAL	ATMOS-PHERIC	GEO-LOGICAL	OCEAN-OGRAPHY	ENVIRON-MENTAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	957,391	257,247	653,950	32,567	13,627	234,251	114,608	64,589	36,657	18,397
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	91,014	89,249	1,712	53	-	3,265	1,181	2,084	-	-
AGRICULTURAL RESEARCH SERVICE..........	49,102	49,049	-	53	-	583	143	440	-	-
COOPERATIVE STATE RESEARCH SERVICE.....	26,029	24,317	1,712	-	-	217	217	-	-	-
FOREST SERVICE.........................	15,883	15,883	-	-	-	2,465	821	1,644	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	17,214	17,214	-	-	-	10,519	6,694	2,231	1,594	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	17,214	17,214	-	-	-	10,519	6,694	2,231	1,594	-
DEPARTMENT OF DEFENSE, TOTAL...........	75,117	25,401	25,621	23,920	175	78,924	23,422	21,714	20,400	13,388
DEPARTMENT OF THE ARMY.................	35,940	16,059	19,716	-	165	9,562	5,162	2,460	1,690	250
DEPARTMENT OF THE NAVY.................	5,832	710	5,112	-	10	19,814	1,965	-	17,105	744
DEPARTMENT OF THE AIR FORCE............	24,507	-	587	23,920	-	7,931	7,162	769	-	-
DEFENSE AGENCIES.......................	8,218	8,218	-	-	-	41,617	9,133	18,485	1,605	12,394
DEPARTMENTWIDE FUNDS...................	620	414	206	-	-	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	596,851	19,207	577,644	-	-	465	-	-	-	465
FOOD AND DRUG ADMINISTRATION...........	15,492	11,837	3,655	-	-	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	75,908	7,370	68,538	-	-	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	493,831	-	493,831	-	-	465	-	-	-	465
OFFICE OF CHILD DEVELOPMENT............	500	-	500	-	-	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	11,120	-	11,120	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	11,830	11,800	-	-	30	14,387	4,870	9,327	171	19
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	-	31	-	31	-	-
BUREAU OF LAND MANAGEMENT..............	635	635	-	-	-	-	-	-	-	-
BUREAU OF MINES........................	-	-	-	-	-	1,648	-	1,587	61	-
BUREAU OF RECLAMATION..................	13	-	-	-	13	4,810	4,810	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	9,582	9,582	-	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	-	-	-	-	-	6,602	-	6,506	96	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	1,600	1,583	-	-	17	1,296	60	1,203	14	19
DEPARTMENT OF JUSTICE, TOTAL...........	326	326	-	-	-	-	-	-	-	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	326	326	-	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	14,421	10,497	3,924	-	-	-	-	-	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	14,421	10,497	3,924	-	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	3,145	1,371	123	-	1,651	4,249	400	50	1,970	1,829
FEDERAL AVIATION ADMINISTRATION........	1,484	1,361	123	-	-	400	400	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,651	-	-	-	1,651	-	-	-	-	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	249	-	-	-	249
UNITED STATES COAST GUARD..............	10	10	-	-	-	2,164	-	-	1,970	194
URBAN MASS TRANSPORTATION ADMIN........	-	-	-	-	-	1,436	-	50	-	1,386
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION...............	43,120	35,050	8,070	-	-	9,462	5,318	1,942	2,202	-
ENVIRONMENTAL PROTECTION AGENCY........	17,057	11,013	660	5,384	-	4,240	749	36	1,716	1,739
NATIONAL AERONAUTICS & SPACE ADMIN.....	27,720	13,419	2,530	-	11,771	102,411	69,533	25,660	7,218	-
NATIONAL SCIENCE FOUNDATION............	7,457	7,247	-	210	-	6,239	2,425	1,482	1,375	957

DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL........	91,014	89,249	1,712	53	-	3,265	1,181	2,084	-	-
AGRICULTURAL RESEARCH SERVICE...........	49,102	49,049	-	53	-	583	143	440	-	-
COOPERATIVE STATE RESEARCH SERVICE......	26,029	24,317	1,712	-	-	217	217	-	-	-
FOREST SERVICE..........................	15,883	15,883	-	-	-	2,465	821	1,644	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	17,214	17,214	-	-	-	10,519	6,694	2,231	1,594	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	17,214	17,214	-	-	-	10,519	6,694	2,231	1,594	-
DEPARTMENT OF DEFENSE, TOTAL...........	75,117	25,401	25,621	23,920	175	78,924	23,422	21,714	20,400	13,388
DEPARTMENT OF THE ARMY.................	35,940	16,059	19,716	-	165	9,562	5,162	2,460	1,690	250
DEPARTMENT OF THE NAVY.................	5,832	710	5,112	-	10	19,814	1,965	-	17,105	744
DEPARTMENT OF THE AIR FORCE............	24,507	-	587	23,920	-	7,931	7,162	769	-	-
DEFENSE AGENCIES.......................	8,218	8,218	-	-	-	41,617	9,133	18,485	1,605	12,394
DEPARTMENTWIDE FUNDS...................	620	414	206	-	-	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	596,851	19,207	577,644	-	-	465	-	-	-	465
FOOD AND DRUG ADMINISTRATION...........	15,492	11,837	3,655	-	-	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	75,908	7,370	68,538	-	-	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	493,831	-	493,831	-	-	465	-	-	-	465
OFFICE OF CHILD DEVELOPMENT............	500	-	500	-	-	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	11,120	-	11,120	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	11,830	11,800	-	-	30	14,387	4,870	9,327	171	19
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	-	31	-	31	-	-
BUREAU OF LAND MANAGEMENT..............	635	635	-	-	-	-	-	-	-	-
BUREAU OF MINES........................	-	-	-	-	-	1,648	-	1,587	61	-
BUREAU OF RECLAMATION..................	13	-	-	-	13	4,810	4,810	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	9,582	9,582	-	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	-	-	-	-	-	6,602	-	6,506	96	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	1,600	1,583	-	-	17	1,296	60	1,203	14	19
DEPARTMENT OF JUSTICE, TOTAL...........	326	326	-	-	-	-	-	-	-	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	326	326	-	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	14,421	10,497	3,924	-	-	-	-	-	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	14,421	10,497	3,924	-	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	3,145	1,371	123	-	1,651	4,249	400	50	1,970	1,829
FEDERAL AVIATION ADMINISTRATION........	1,484	1,361	123	-	-	400	400	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,651	-	-	-	1,651	-	-	-	-	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	249	-	-	-	249
UNITED STATES COAST GUARD..............	10	10	-	-	-	2,164	-	-	1,970	194
URBAN MASS TRANSPORTATION ADMIN........	-	-	-	-	-	1,436	-	50	-	1,386
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION...............	43,120	35,050	8,070	-	-	9,462	5,318	1,942	2,202	-
ENVIRONMENTAL PROTECTION AGENCY........	17,057	11,013	660	5,384	-	4,240	749	36	1,716	1,739
NATIONAL AERONAUTICS & SPACE ADMIN.....	27,720	13,419	2,530	-	11,771	102,411	69,533	25,660	7,218	-
NATIONAL SCIENCE FOUNDATION............	7,457	7,247	-	210	-	6,239	2,425	1,482	1,375	957
OFFICE OF ECONOMIC OPPORTUNITY.........	2,600	-	2,600	-	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	170	104	66	-	-	50	16	23	11	-
SMITHSONIAN INSTITUTION................	-	-	-	-	-	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY.............	1,727	1,727	-	-	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	-	-	-	-	-	40	-	40	-	-
VETERANS ADMINISTRATION................	47,622	13,622	31,000	3,000	-	-	-	-	-	-

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	LIFE SCIENCES					ENVIRONMENTAL SCIENCES				
	TOTAL	BIO-LOGICAL	CLINICAL MEDICAL	OTHER MEDICAL SCIENCES	LIFE SCIENCES NEC	TOTAL	ATMOS-PHERIC	GEO-LOGICAL	OCEAN-OGRAPHY	ENVIRON-MENTAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	1,103,977	279,005	770,237	33,213	21.522	270,532	138,355	71,372	35,668	25,137
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	99,211	97,268	1,879	64	-	3,514	1,269	2,245	-	-
AGRICULTURAL RESEARCH SERVICE..........	53,726	53,662	-	64	-	618	150	468	-	-
COOPERATIVE STATE RESEARCH SERVICE.....	28,574	26,695	1,879	-	-	230	230	-	-	-
FOREST SERVICE.........................	16,911	16,911	-	-	-	2,666	889	1,777	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	22,948	22,948	-	-	-	14,024	8,924	2,975	2,125	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	22,948	22,948	-	-	-	14,024	8,924	2,975	2,125	-
DEPARTMENT OF DEFENSE, TOTAL...........	65,211	19,511	21,115	24,261	324	76,766	18,993	22,720	15,535	19,518
DEPARTMENT OF THE ARMY.................	28,938	13,558	15,256	-	124	8,250	4,268	2,077	1,730	175
DEPARTMENT OF THE NAVY.................	5,928	777	5,151	-	-	14,682	1,726	-	12,291	665
DEPARTMENT OF THE AIR FORCE............	24,801	-	540	24,261	-	6,360	5,743	617	-	-
DEFENSE AGENCIES.......................	5,074	4,874	-	-	200	47,474	7,256	20,026	1,514	18,678
DEPARTMENTWIDE FUNDS...................	470	302	168	-	-	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	712,876	24,096	688,780	-	-	564	-	-	-	564
FOOD AND DRUG ADMINISTRATION...........	16,174	16,174	-	-	-	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	91,361	7,922	83,439	-	-	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	592,011	-	592,011	-	-	564	-	-	-	564
OFFICE OF CHILD DEVELOPMENT............	500	-	500	-	-	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	12,830	-	12,830	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	13,135	13,109	-	-	26	19,397	6,594	12,739	42	22
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	-	46	-	46	-	-
BUREAU OF LAND MANAGEMENT..............	698	698	-	-	-	-	-	-	-	-
BUREAU OF MINES........................	-	-	-	-	-	2,334	-	2,315	19	-
BUREAU OF RECLAMATION..................	10	-	-	-	10	6,525	6,525	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	10,581	10,581	-	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	-	-	-	-	-	8,996	-	8,986	10	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	1,846	1,830	-	-	16	1,496	69	1,392	13	22
DEPARTMENT OF JUSTICE, TOTAL...........	778	778	-	-	-	-	-	-	-	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	778	778	-	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	18,731	11,908	6,823	-	-	60	-	60	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	18,731	11,908	6,823	-	-	60	-	60	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	3,127	1,517	150	310	1,150	4,150	768	50	2,585	747
FEDERAL AVIATION ADMINISTRATION........	1,667	1,517	150	-	-	768	768	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	310	-	-	310	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,150	-	-	-	1,150	-	-	-	-	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	694	-	-	-	694
UNITED STATES COAST GUARD..............	-	-	-	-	-	2,638	-	-	2,585	53
URBAN MASS TRANSPORTATION ADMIN........	-	-	-	-	-	50	-	50	-	-
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION...............	43,102	35,002	8,100	-	-	9,298	5,160	1,995	2,143	-
ENVIRONMENTAL PROTECTION AGENCY........	18,888	12,754	556	5,578	-	5,044	651	30	2,434	1,929
NATIONAL AERONAUTICS & SPACE ADMIN.....	35,890	13,596	3,079	-	19,215	129,562	93,179	27,029	9,354	-
NATIONAL SCIENCE FOUNDATION............	10,765	9,958	-	-	807	8,054	2,800	1,458	1,439	2,357
OFFICE OF ECONOMIC OPPORTUNITY.........	6,900	-	6,900	-	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	182	111	71	-	-	53	17	25	11	-
SMITHSONIAN INSTITUTION................	-	-	-	-	-	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY.............	1,949	1,949	-	-	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	-	-	-	-	-	46	-	46	-	-
VETERANS ADMINISTRATION................	50,284	14,500	32,784	3,000	-	-	-	-	-	-

TABLE C-60. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN LIFE AND ENVIRONMENTAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	LIFE SCIENCES					ENVIRONMENTAL SCIENCES				
	TOTAL	BIO-LOGICAL	CLINICAL MEDICAL	OTHER MEDICAL SCIENCES	LIFE SCIENCES NEC	TOTAL	ATMOS-PHERIC	GEO-LOGICAL	OCEAN-OGRAPHY	ENVIRON-MENTAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	1,209,762	298,736	844,027	44,233	22,766	282,734	142,730	74,913	37,287	27,804
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	103,899	101,726	2,065	108	-	3,550	1,306	2,244	-	-
AGRICULTURAL RESEARCH SERVICE..........	55,338	55,230	-	108	-	619	152	467	-	-
COOPERATIVE STATE RESEARCH SERVICE.....	31,377	29,312	2,065	-	-	265	265	-	-	-
FOREST SERVICE.........................	17,184	17,184	-	-	-	2,666	889	1,777	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	27,772	27,772	-	-	-	16,972	10,800	3,600	2,572	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	27,772	27,772	-	-	-	16,972	10,800	3,600	2,572	-
DEPARTMENT OF DEFENSE, TOTAL...........	71,733	19,781	24,034	27,818	100	74,634	20,073	22,481	15,780	16,300
DEPARTMENT OF THE ARMY.................	30,402	13,873	16,429	-	100	8,731	4,465	2,201	1,865	200
DEPARTMENT OF THE NAVY.................	8,285	855	7,430	-	-	16,078	3,082	-	12,335	661
DEPARTMENT OF THE AIR FORCE............	27,818	-	-	27,818	-	6,651	6,006	645	-	-
DEFENSE AGENCIES.......................	4,739	4,739	-	-	-	43,174	6,520	19,635	1,580	15,439
DEPARTMENTWIDE FUNDS...................	489	314	175	-	-	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	798,855	31,412	767,443	-	-	644	-	-	-	644
FOOD AND DRUG ADMINISTRATION...........	21,909	21,909	-	-	-	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	87,234	9,503	77,731	-	-	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	671,512	-	671,512	-	-	644	-	-	-	644
OFFICE OF CHILD DEVELOPMENT............	1,000	-	1,000	-	-	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	17,200	-	17,200	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	14,172	14,143	-	-	29	22,745	6,779	15,770	16[illegible]	28
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
BUREAU OF LAND MANAGEMENT..............	735	735	-	-	-	-	-	-	-	-
BUREAU OF MINES........................	-	-	-	-	-	772	-	772	-	-
BUREAU OF RECLAMATION..................	5	-	-	-	5	6,700	6,700	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	11,446	11,446	-	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	-	-	-	-	-	13,502	-	13,492	10	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	140	-	-	140	-
OFFICE OF WATER RESOURCES RESEARCH.....	1,986	1,962	-	-	24	1,631	79	1,506	18	28
DEPARTMENT OF JUSTICE, TOTAL...........	1,399	1,399	-	-	-	-	-	-	-	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	1,399	1,399	-	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	19,219	12,192	7,027	-	-	200	-	200	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	19,219	12,192	7,027	-	-	200	-	200	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	4,805	1,649	156	500	2,500	7,755	3,000	50	2,930	1,775
FEDERAL AVIATION ADMINISTRATION........	1,805	1,649	156	-	-	3,000	3,000	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	500	-	-	500	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	2,500	-	-	-	2,500					

COOPERATIVE STATE RESEARCH SERVICE.....	31,377	29,312	2,065	-	-	265	265	-	-	-
FOREST SERVICE..........................	17,184	17,184	-	-	-	2,666	889	1,777	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	27,772	27,772	-	-	-	16,972	10,800	3,600	2,572	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	27,772	27,772	-	-	-	16,972	10,800	3,600	2,572	-
DEPARTMENT OF DEFENSE, TOTAL...........	71,733	19,781	24,034	27,818	100	74,634	20,073	22,481	15,780	16,300
DEPARTMENT OF THE ARMY.................	30,402	13,873	16,429	-	100	8,731	4,465	2,201	1,865	200
DEPARTMENT OF THE NAVY.................	8,285	855	7,430	-	-	16,078	3,082	-	12,335	661
DEPARTMENT OF THE AIR FORCE............	27,818	-	-	27,818	-	6,651	6,006	645	-	-
DEFENSE AGENCIES.......................	4,739	4,739	-	-	-	43,174	6,520	19,635	1,580	15,439
DEPARTMENTWIDE FUNDS...................	489	314	175	-	-	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	798,855	31,412	767,443	-	-	644	-	-	-	644
FOOD AND DRUG ADMINISTRATION...........	21,909	21,909	-	-	-	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	87,234	9,503	77,731	-	-	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	671,512	-	671,512	-	-	644	-	-	-	644
OFFICE OF CHILD DEVELOPMENT............	1,000	-	1,000	-	-	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE......	17,200	-	17,200	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	14,172	14,143	-	-	29	22,745	6,779	15,770	168	28
BONNEVILLE POWER ADMINISTRATION........	-	-	-	-	-	-	-	-	-	-
BUREAU OF LAND MANAGEMENT..............	735	735	-	-	-	-	-	-	-	-
BUREAU OF MINES........................	-	-	-	-	-	772	-	772	-	-
BUREAU OF RECLAMATION..................	5	-	-	-	5	6,700	6,700	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	11,446	11,446	-	-	-	-	-	-	-	-
GEOLOGICAL SURVEY......................	-	-	-	-	-	13,502	-	13,492	10	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	140	-	-	140	-
OFFICE OF WATER RESOURCES RESEARCH.....	1,986	1,962	-	-	24	1,631	79	1,506	18	28
DEPARTMENT OF JUSTICE, TOTAL...........	1,399	1,399	-	-	-	-	-	-	-	-
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	1,399	1,399	-	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	19,219	12,192	7,027	-	-	200	-	200	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	19,219	12,192	7,027	-	-	200	-	200	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	4,805	1,649	156	500	2,500	7,755	3,000	50	2,930	1,775
FEDERAL AVIATION ADMINISTRATION........	1,805	1,649	156	-	-	3,000	3,000	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	500	-	-	500	-	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	2,500	-	-	-	2,500	-	-	-	-	-
OFFICE OF THE SECRETARY................	-	-	-	-	-	675	-	-	-	675
UNITED STATES COAST GUARD..............	-	-	-	-	-	3,030	-	-	2,930	100
URBAN MASS TRANSPORTATION ADMIN........	-	-	-	-	-	1,050	-	50	-	1,000
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION...............	43,367	35,457	7,910	-	-	9,580	5,520	1,800	2,260	-
ENVIRONMENTAL PROTECTION AGENCY........	22,656	14,889	539	7,228	-	6,310	647	29	3,077	2,557
NATIONAL AERONAUTICS & SPACE ADMIN.....	35,457	11,114	977	5,579	17,787	127,802	90,837	27,668	9,297	-
NATIONAL SCIENCE FOUNDATION............	12,880	10,530	-	-	2,350	12,440	3,750	1,000	1,190	6,500
OFFICE OF ECONOMIC OPPORTUNITY.........	900	-	900	-	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	198	121	77	-	-	58	18	27	13	-
SMITHSONIAN INSTITUTION................	-	-	-	-	-	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY.............	2,051	2,051	-	-	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	-	-	-	-	-	44	-	44	-	-
VETERANS ADMINISTRATION................	50,399	14,500	32,899	3,000	-	-	-	-	-	-

TABLE C-61. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	AERO-NAUTICAL	ASTRO-NAUTICAL	CHEMICAL	CIVIL	ELEC-TRICAL	MECHANICAL	METALLURGY AND MATERIALS	ENGI-NEERING NEC
TOTAL, ALL AGENCIES....................	1,725,098	407,744	272,550	108,299	53,137	319,115	97,039	98,108	369,106
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	18,617	-	-	1,766	2,225	54	988	-	13,584
AGRICULTURAL RESEARCH SERVICE..........	12,665	-	-	1,492	1,677	54	440	-	9,002
COOPERATIVE STATE RESEARCH SERVICE.....	1,297	-	-	-	-	-	-	-	1,297
FOREST SERVICE.........................	4,655	-	-	274	548	-	548	-	3,285
DEPARTMENT OF COMMERCE, TOTAL..........	11,802	-	-	956	3,967	3,726	563	391	2,199
MARITIME ADMINISTRATION................	3,268	-	-	-	2,729	71	-	-	468
NATIONAL BUREAU OF STANDARDS...........	6,621	-	-	-	1,238	3,017	244	391	1,731
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	1,913	-	-	956	-	638	319	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	914,022	162,805	101,977	35,472	14,932	247,794	54,952	51,050	245,040
DEPARTMENT OF THE ARMY.................	119,505	16,797	10	18,178	8,083	36,356	12,432	13,078	14,571
DEPARTMENT OF THE NAVY.................	101,232	11,812	856	9,976	3,102	35,356	21,813	12,617	5,700
DEPARTMENT OF THE AIR FORCE............	542,529	125,601	91,678	5,563	1,570	130,144	14,952	24,501	148,520
DEFENSE AGENCIES.......................	149,703	8,595	9,433	1,755	1,617	45,839	5,571	854	76,039
DEPARTMENTWIDE FUNDS...................	1,053	-	-	-	560	99	184	-	210
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	20,380	-	-	-	-	87	-	31	20,262
HEALTH SERVICES & MENTAL HEALTH ADMIN..	87	-	-	-	-	87	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	20,148	-	-	-	-	-	-	31	20,117
SOCIAL AND REHABILITATION SERVICE......	145	-	-	-	-	-	-	-	145
DEPARTMENT OF HOUSING & URBAN DEVELOP..	7,097	-	-	-	6,387	213	213	284	-
DEPARTMENT OF THE INTERIOR, TOTAL......	37,579	-	-	14,233	5,347	2,398	1,557	12,681	1,363
BONNEVILLE POWER ADMINISTRATION........	448	-	-	-	-	448	-	-	-
BUREAU OF MINES........................	22,205	-	-	7,961	24	823	736	12,661	-
BUREAU OF RECLAMATION..................	2,255	-	-	-	2,089	166	-	-	-
GEOLOGICAL SURVEY......................	1,374	-	-	-	1,174	-	200	-	-
OFFICE OF COAL RESEARCH................	2,341	-	-	1,000	-	891	440	-	10
OFFICE OF SALINE WATER.................	5,001	-	-	5,001	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	3,955	-	-	271	2,060	70	181	20	1,353
DEPARTMENT OF JUSTICE, TOTAL...........	363	-	-	-	-	363	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	363	-	-	-	-	363	-	-	-
DEPARTMENT OF STATE, TOTAL.............	1,392	-	-	-	1,190	-	202	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	1,392	-	-	-	1,190	-	202	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	42,516	2,635	-	1,402	8,456	2,110	10,017	5,539	12,357
FEDERAL AVIATION ADMINISTRATION........	7,331	1,915	-	-	180	-	-	-	5,236
FEDERAL HIGHWAY ADMINISTRATION.........	20,157	-	-	1,008	6,047	1,008	2,016	5,019	5,059
FEDERAL RAILROAD ADMINISTRATION........	4,020	720	-	-	1,093	1,007	700	500	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	7,166	-	-	-	-	-	7,166	-	-
OFFICE OF THE SECRETARY................	1,902	-	-	-	-	-	-	-	1,902
UNITED STATES COAST GUARD..............	595	-	-	394	201	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	1,345	-	-	-	935	95	135	20	160
DEPARTMENT OF THE TREASURY, TOTAL......	16	-	-	-	-	-	-	16	-
BUREAU OF ENGRAVING AND PRINTING.......	16	-	-	-	-	-	-	16	-

DEPARTMENT OF DEFENSE, TOTAL...........	914,022	162,805	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DEPARTMENT OF THE ARMY..................	119,505	16,797	10	18,178	8,083	36,356	12,432	13,078	14,571
DEPARTMENT OF THE NAVY..................	101,232	11,812	856	9,976	3,102	35,356	21,813	12,617	5,700
DEPARTMENT OF THE AIR FORCE.............	542,529	125,601	91,678	5,563	1,570	130,144	14,952	24,501	148,520
DEFENSE AGENCIES........................	149,703	8,595	9,433	1,755	1,617	45,839	5,571	854	76,039
DEPARTMENTWIDE FUNDS....................	1,053	-	-	-	560	99	184	-	210
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	20,380	-	-	-	-	87	-	31	20,262
HEALTH SERVICES & MENTAL HEALTH ADMIN..	87	-	-	-	-	87	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	20,148	-	-	-	-	-	-	31	20,117
SOCIAL AND REHABILITATION SERVICE......	145	-	-	-	-	-	-	-	145
DEPARTMENT OF HOUSING & URBAN DEVELOP..	7,097	-	-	-	6,387	213	213	284	-
DEPARTMENT OF THE INTERIOR, TOTAL......	37,579	-	-	14,233	5,347	2,398	1,557	12,681	1,363
BONNEVILLE POWER ADMINISTRATION........	448	-	-	-	-	448	-	-	-
BUREAU OF MINES........................	22,205	-	-	7,961	24	823	736	12,661	-
BUREAU OF RECLAMATION..................	2,255	-	-	-	2,089	166	-	-	-
GEOLOGICAL SURVEY......................	1,374	-	-	-	1,174	-	200	-	-
OFFICE OF COAL RESEARCH................	2,341	-	-	1,000	-	891	440	-	10
OFFICE OF SALINE WATER.................	5,001	-	-	5,001	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	3,955	-	-	271	2,060	70	181	20	1,353
DEPARTMENT OF JUSTICE, TOTAL...........	363	-	-	-	-	363	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	363	-	-	-	-	363	-	-	-
DEPARTMENT OF STATE, TOTAL.............	1,392	-	-	-	1,190	-	202	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	1,392	-	-	-	1,190	-	202	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	42,516	2,635	-	1,402	8,456	2,110	10,017	5,539	12,357
FEDERAL AVIATION ADMINISTRATION........	7,331	1,915	-	-	180	-	-	-	5,236
FEDERAL HIGHWAY ADMINISTRATION.........	20,157	-	-	1,008	6,047	1,008	2,016	5,019	5,059
FEDERAL RAILROAD ADMINISTRATION........	4,020	720	-	-	1,093	1,007	700	500	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	7,166	-	-	-	-	-	7,166	-	-
OFFICE OF THE SECRETARY................	1,902	-	-	-	-	-	-	-	1,902
UNITED STATES COAST GUARD..............	595	-	-	394	201	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	1,345	-	-	-	935	95	135	20	160
DEPARTMENT OF THE TREASURY, TOTAL......	16	-	-	-	-	-	-	16	-
BUREAU OF ENGRAVING AND PRINTING.......	16	-	-	-	-	-	-	16	-
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	24,554	-	-	4,350	-	-	-	18,900	1,304
ENVIRONMENTAL PROTECTION AGENCY........	19,586	-	137	6,747	7,870	197	4,635	-	-
FEDERAL COMMUNICATIONS COMMISSION......	1,015	-	-	-	-	1,015	-	-	-
GENERAL SERVICES ADMINISTRATION........	194	-	-	-	194	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	614,360	242,279	170,411	41,220	116	59,417	22,401	8,863	69,653
NATIONAL SCIENCE FOUNDATION............	4,258	-	-	830	380	1,030	1,488	330	200
OFFICE OF EMERGENCY PREPAREDNESS.......	531	-	-	-	-	531	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	167	25	25	25	23	23	23	23	-
TENNESSEE VALLEY AUTHORITY.............	3,406	-	-	1,298	2,050	-	-	-	58
US ARMS CONTROL & DISARMAMENT AGENCY...	2,811	-	-	-	-	-	-	-	2,811
UNITED STATES INFORMATION AGENCY.......	157	-	-	-	-	157	-	-	-
VETERANS ADMINISTRATION................	275	-	-	-	-	-	-	-	275

TABLE C-62. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	AERO-NAUTICAL	ASTRO-NAUTICAL	CHEMICAL	CIVIL	ELEC-TRICAL	MECHANICAL	METALLURGY AND MATERIALS	ENGI-NEERING NEC
TOTAL, ALL AGENCIES....................	1,774,211	414,083	272,920	104,546	73,467	321,299	105,369	101,851	380,676
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	20,377	-	-	1,994	2,371	38	1,079	-	14,895
AGRICULTURAL RESEARCH SERVICE..........	13,917	-	-	1,698	1,779	38	487	-	9,915
COOPERATIVE STATE RESEARCH SERVICE.....	1,423	-	-	-	-	-	-	-	1,423
FOREST SERVICE.........................	5,037	-	-	296	592	-	592	-	3,557
DEPARTMENT OF COMMERCE, TOTAL..........	25,882	-	-	1,275	12,498	7,027	2,264	408	2,410
MARITIME ADMINISTRATION................	15,905	-	-	-	11,175	2,544	1,584	-	602
NATIONAL BUREAU OF STANDARDS...........	6,943	-	-	-	1,323	3,149	255	408	1,808
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	2,550	-	-	1,275	-	850	425	-	-
OFFICE OF TELECOMMUNICATIONS...........	484	-	-	-	-	484	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	861,585	140,547	89,268	32,881	16,992	244,187	50,472	50,559	236,679
DEPARTMENT OF THE ARMY.................	108,026	17,151	-	12,907	7,117	31,229	10,986	12,626	16,010
DEPARTMENT OF THE NAVY.................	99,401	10,810	1,233	11,487	3,975	35,417	18,623	12,874	4,982
DEPARTMENT OF THE AIR FORCE............	519,233	105,105	83,836	6,577	3,520	136,970	17,859	24,169	141,197
DEFENSE AGENCIES.......................	134,036	7,481	4,199	1,910	1,866	40,512	2,898	890	74,280
DEPARTMENTWIDE FUNDS...................	889	-	-	-	514	59	106	-	210
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	24,530	-	-	-	-	66	-	36	24,428
HEALTH SERVICES & MENTAL HEALTH ADMIN..	66	-	-	-	-	66	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	24,314	-	-	-	-	-	-	36	24,278
SOCIAL AND REHABILITATION SERVICE......	150	-	-	-	-	-	-	-	150
DEPARTMENT OF HOUSING & URBAN DEVELOP..	11,862	-	-	-	10,676	356	356	474	-
DEPARTMENT OF THE INTERIOR, TOTAL......	42,604	-	-	12,953	5,788	3,297	2,525	15,580	2,461
BONNEVILLE POWER ADMINISTRATION........	381	-	-	-	-	381	-	-	-
BUREAU OF MINES........................	25,139	-	-	8,042	24	1,334	1,126	14,613	-
BUREAU OF RECLAMATION..................	2,374	-	-	-	2,203	171	-	-	-
GEOLOGICAL SURVEY......................	1,391	-	-	-	1,191	-	200	-	-
OFFICE OF COAL RESEARCH................	4,809	-	-	1,209	-	750	1,000	950	900
OFFICE OF SALINE WATER.................	3,400	-	-	3,400	-	-	-	-	-
OFFICE OF THE SECRETARY................	583	-	-	-	-	583	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	4,527	-	-	302	2,370	78	199	17	1,561
DEPARTMENT OF JUSTICE, TOTAL...........	363	-	-	-	-	363	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	363	-	-	-	-	363	-	-	-
DEPARTMENT OF STATE, TOTAL.............	1,210	-	-	-	1,021	-	189	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...									

COOPERATIVE STATE RESEARCH SERVICE.....	1,423	-	-	-	-	-	-	-	1,423
FOREST SERVICE..........................	5,037	-	-	296	592	-	592	-	3,557
DEPARTMENT OF COMMERCE, TOTAL..........	25,882	-	-	1,275	12,498	7,027	2,264	408	2,410
MARITIME ADMINISTRATION................	15,905	-	-	-	11,175	2,544	1,584	-	602
NATIONAL BUREAU OF STANDARDS...........	6,943	-	-	-	1,323	3,149	255	408	1,808
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	2,550	-	-	1,275	-	850	425	-	-
OFFICE OF TELECOMMUNICATIONS...........	484	-	-	-	-	484	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	861,585	140,547	89,268	32,881	16,992	244,187	50,472	50,559	236,679
DEPARTMENT OF THE ARMY.................	108,026	17,151	-	12,907	7,117	31,229	10,986	12,626	16,010
DEPARTMENT OF THE NAVY.................	99,401	10,810	1,233	11,487	3,975	35,417	18,623	12,874	4,982
DEPARTMENT OF THE AIR FORCE............	519,233	105,105	83,836	6,577	3,520	136,970	17,859	24,169	141,197
DEFENSE AGENCIES.......................	134,036	7,481	4,199	1,910	1,866	40,512	2,898	890	74,280
DEPARTMENTWIDE FUNDS...................	889	-	-	-	514	59	106	-	210
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	24,530	-	-	-	-	66	-	36	24,428
HEALTH SERVICES & MENTAL HEALTH ADMIN..	66	-	-	-	-	66	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	24,314	-	-	-	-	-	-	36	24,278
SOCIAL AND REHABILITATION SERVICE......	150	-	-	-	-	-	-	-	150
DEPARTMENT OF HOUSING & URBAN DEVELOP..	11,862	-	-	-	10,676	356	356	474	-
DEPARTMENT OF THE INTERIOR, TOTAL......	42,604	-	-	12,953	5,788	3,297	2,525	15,580	2,461
BONNEVILLE POWER ADMINISTRATION........	381	-	-	-	-	381	-	-	-
BUREAU OF MINES........................	25,139	-	-	8,042	24	1,334	1,126	14,613	-
BUREAU OF RECLAMATION..................	2,374	-	-	-	2,203	171	-	-	-
GEOLOGICAL SURVEY......................	1,391	-	-	-	1,191	-	200	-	-
OFFICE OF COAL RESEARCH................	4,809	-	-	1,209	-	750	1,000	950	900
OFFICE OF SALINE WATER.................	3,400	-	-	3,400	-	-	-	-	-
OFFICE OF THE SECRETARY................	583	-	-	-	-	583	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	4,527	-	-	302	2,370	78	199	17	1,561
DEPARTMENT OF JUSTICE, TOTAL...........	363	-	-	-	-	363	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	363	-	-	-	-	363	-	-	-
DEPARTMENT OF STATE, TOTAL.............	1,210	-	-	-	1,021	-	189	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	1,210	-	-	-	1,021	-	189	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	67,770	2,415	-	1,114	10,913	1,750	13,228	5,123	33,227
FEDERAL AVIATION ADMINISTRATION........	19,640	2,415	-	-	250	-	-	-	16,975
FEDERAL HIGHWAY ADMINISTRATION.........	19,892	-	-	994	5,968	995	1,989	4,953	4,993
FEDERAL RAILROAD ADMINISTRATION........	5,986	-	-	-	2,601	710	2,295	150	230
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	7,840	-	-	-	-	-	7,840	-	-
OFFICE OF THE SECRETARY................	10,000	-	-	-	-	-	-	-	10,000
UNITED STATES COAST GUARD..............	1,656	-	-	120	1,536	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	2,756	-	-	-	558	45	1,104	20	1,029
DEPARTMENT OF THE TREASURY, TOTAL......	18	-	-	-	-	-	-	18	-
BUREAU OF ENGRAVING AND PRINTING.......	18	-	-	-	-	-	-	18	-
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	24,521	-	-	4,436	-	-	-	19,000	1,085
ENVIRONMENTAL PROTECTION AGENCY........	23,651	-	115	8,332	9,978	166	5,060	-	-
FEDERAL COMMUNICATIONS COMMISSION......	638	-	-	-	-	638	-	-	-
GENERAL SERVICES ADMINISTRATION........	63	-	-	-	63	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	654,366	271,095	183,511	39,087	-	60,836	27,225	10,238	62,374
NATIONAL SCIENCE FOUNDATION............	8,208	-	-	1,090	790	2,390	2,448	390	1,100
OFFICE OF EMERGENCY PREPAREDNESS.......	498	-	-	-	-	-	498	-	-
OFFICE OF SCIENCE AND TECHNOLOGY.......	178	26	26	26	25	25	25	25	-
TENNESSEE VALLEY AUTHORITY.............	4,125	-	-	1,358	2,352	-	-	-	415
US ARMS CONTROL & DISARMAMENT AGENCY...	1,317	-	-	-	-	-	-	-	1,317
UNITED STATES INFORMATION AGENCY.......	160	-	-	-	-	160	-	-	-
VETERANS ADMINISTRATION................	285	-	-	-	-	-	-	-	285

TABLE C-63. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	AERO-NAUTICAL	ASTRO-NAUTICAL	CHEMICAL	CIVIL	ELEC-TRICAL	MECHANICAL	METALLURGY AND MATERIALS	ENGI-NEERING NEC
TOTAL, ALL AGENCIES....................	1,949,663	423,502	314,639	111,157	88,545	359,830	102,009	106,600	443,381
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	20,565	-	-	2,047	2,369	38	1,081	-	15,030
AGRICULTURAL RESEARCH SERVICE..........	13,964	-	-	1,751	1,777	38	489	-	9,909
COOPERATIVE STATE RESEARCH SERVICE.....	1,564	-	-	-	-	-	-	-	1,564
FOREST SERVICE.........................	5,037	-	-	296	592	-	592	-	3,557
DEPARTMENT OF COMMERCE, TOTAL..........	26,065	-	-	1,543	14,168	5,645	769	408	3,532
MARITIME ADMINISTRATION................	13,895	-	-	-	12,320	-	-	-	1,575
NATIONAL BUREAU OF STANDARDS...........	7,615	-	-	-	1,848	3,147	255	408	1,957
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	3,086	-	-	1,543	-	1,029	514	-	-
OFFICE OF TELECOMMUNICATIONS...........	1,469	-	-	-	-	1,469	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	957,306	144,863	101,973	38,999	20,960	284,636	47,233	57,051	261,591
DEPARTMENT OF THE ARMY.................	119,791	18,494	-	16,360	7,545	37,529	12,036	13,408	14,419
DEPARTMENT OF THE NAVY.................	106,657	10,921	1,006	12,186	7,820	32,951	18,977	17,356	5,440
DEPARTMENT OF THE AIR FORCE............	567,251	112,448	96,532	6,653	2,820	169,188	12,359	25,387	141,864
DEFENSE AGENCIES.......................	162,682	3,000	4,435	3,800	2,240	44,907	3,750	900	99,650
DEPARTMENTWIDE FUNDS...................	925	-	-	-	535	61	111	-	218
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	27,894	-	-	-	-	44	-	41	27,809
HEALTH SERVICES & MENTAL HEALTH ADMIN..	44	-	-	-	-	44	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	27,750	-	-	-	-	-	-	41	27,709
SOCIAL AND REHABILITATION SERVICE......	100	-	-	-	-	-	-	-	100
DEPARTMENT OF HOUSING & URBAN DEVELOP..	12,740	-	-	-	11,466	382	382	510	-
DEPARTMENT OF THE INTERIOR, TOTAL......	45,693	-	3,775	10,732	7,582	3,131	1,815	16,160	2,498
BONNEVILLE POWER ADMINISTRATION........	431	-	-	-	-	431	-	-	-
BUREAU OF MINES........................	27,314	-	-	9,033	1,343	789	1,335	14,814	-
BUREAU OF RECLAMATION..................	2,708	-	-	-	2,538	170	-	-	-
GEOLOGICAL SURVEY......................	1,460	-	-	-	1,250	-	210	-	-
OFFICE OF COAL RESEARCH................	4,059	-	-	1,259	-	750	-	1,150	900
OFFICE OF SALINE WATER.................	3,775	-	3,775	-	-	-	-	-	-
OFFICE OF THE SECRETARY................	1,053	-	-	75	-	818	-	160	-
OFFICE OF WATER RESOURCES RESEARCH.....	4,893	-	-	365	2,451	173	270	36	1,598
DEPARTMENT OF JUSTICE, TOTAL...........	1,990	-	-	-	-	1,990	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	1,990	-	-	-	-	1,990	-	-	-
DEPARTMENT OF STATE, TOTAL.............	1,705	-	-	-	1,455	-	250	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	1,705	-	-	-	1,455	-	250	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	123,865	3,500	200	1,332	14,732	2,085	18,213	5,938	77,865
FEDERAL AVIATION ADMINISTRATION........	54,586	3,500	-	-	300	-	-	-	50,786
FEDERAL HIGHWAY ADMINISTRATION.........	23,284	-	-	1,164	6,985	1,165	2,328	5,798	5,844
FEDERAL RAILROAD ADMINISTRATION........	5,765	-	-	-	2,420	900	2,000	120	325
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	12,750	-	-	-	-	-	12,750	-	-
OFFICE OF THE SECRETARY................	20,750	-	-	-	-	-	-	-	20,750
UNITED STATES COAST GUARD..............	4,730	-	200	168	4,362	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	2,000	-	-	-	665	20	1,135	20	160

NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	3,088								
OFFICE OF TELECOMMUNICATIONS...........	1,469	-	-	-	-	1,469	-		
DEPARTMENT OF DEFENSE, TOTAL...........	957,306	144,863	101,973	38,999	20,960	284,636	47,233	57,051	261,591
DEPARTMENT OF THE ARMY..................	119,791	18,494	-	16,360	7,545	37,529	12,036	13,408	14,419
DEPARTMENT OF THE NAVY..................	106,657	10,921	1,006	12,186	7,820	32,951	18,977	17,356	5,440
DEPARTMENT OF THE AIR FORCE.............	567,251	112,448	96,532	6,653	2,820	169,188	12,359	25,387	141,864
DEFENSE AGENCIES........................	162,682	3,000	4,435	3,800	2,240	44,907	3,750	900	99,650
DEPARTMENTWIDE FUNDS....................	925	-	-	-	535	61	111	-	218
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	27,894	-	-	-	-	44	-	41	27,809
HEALTH SERVICES & MENTAL HEALTH ADMIN..	44	-	-	-	-	44	-	-	-
NATIONAL INSTITUTES OF HEALTH..........	27,750	-	-	-	-	-	-	41	27,709
SOCIAL AND REHABILITATION SERVICE......	100	-	-	-	-	-	-	-	100
DEPARTMENT OF HOUSING & URBAN DEVELOP..	12,740	-	-	-	11,466	382	382	510	-
DEPARTMENT OF THE INTERIOR, TOTAL......	45,693	-	3,775	10,732	7,582	3,131	1,815	16,160	2,498
BONNEVILLE POWER ADMINISTRATION........	431	-	-	-	-	431	-	-	-
BUREAU OF MINES........................	27,314	-	-	9,033	1,343	789	1,335	14,814	-
BUREAU OF RECLAMATION..................	2,708	-	-	-	2,538	170	-	-	-
GEOLOGICAL SURVEY......................	1,460	-	-	-	1,250	-	210	-	-
OFFICE OF COAL RESEARCH................	4,059	-	-	1,259	-	750	-	1,150	900
OFFICE OF SALINE WATER.................	3,775	-	3,775	-	-	-	-	-	-
OFFICE OF THE SECRETARY................	1,053	-	-	75	-	818	-	160	-
OFFICE OF WATER RESOURCES RESEARCH.....	4,893	-	-	365	2,451	173	270	36	1,598
DEPARTMENT OF JUSTICE, TOTAL...........	1,990	-	-	-	-	1,990	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	1,990	-	-	-	-	1,990	-	-	-
DEPARTMENT OF STATE, TOTAL.............	1,705	-	-	-	1,455	-	250	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	1,705	-	-	-	1,455	-	250	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	123,865	3,500	200	1,332	14,732	2,085	18,213	5,938	77,865
FEDERAL AVIATION ADMINISTRATION........	54,586	3,500	-	-	300	-	-	-	50,786
FEDERAL HIGHWAY ADMINISTRATION.........	23,284	-	-	1,164	6,985	1,165	2,328	5,798	5,844
FEDERAL RAILROAD ADMINISTRATION........	5,765	-	-	-	2,420	900	2,000	120	325
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	12,750	-	-	-	-	-	12,750	-	-
OFFICE OF THE SECRETARY................	20,750	-	-	-	-	-	-	-	20,750
UNITED STATES COAST GUARD..............	4,730	-	200	168	4,362	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	2,000	-	-	-	665	20	1,135	20	160
DEPARTMENT OF THE TREASURY, TOTAL......	18	-	-	-	-	-	-	18	-
BUREAU OF ENGRAVING AND PRINTING.......	18	-	-	-	-	-	-	18	-
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	24,420	-	-	4,415	-	-	-	19,100	905
ENVIRONMENTAL PROTECTION AGENCY........	31,911	-	112	11,820	12,244	161	7,574	-	-
FEDERAL COMMUNICATIONS COMMISSION......	869	-	-	-	-	869	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	653,361	275,110	208,550	36,822	-	56,122	23,115	6,798	46,844
NATIONAL SCIENCE FOUNDATION............	14,550	-	-	2,050	1,350	4,550	1,550	550	4,500
OFFICE OF SCIENCE AND TECHNOLOGY.......	194	29	29	29	27	27	27	26	-
TENNESSEE VALLEY AUTHORITY.............	4,685	-	-	1,368	2,192	-	-	-	1,125
US ARMS CONTROL & DISARMAMENT AGENCY...	1,397	-	-	-	-	-	-	-	1,397
UNITED STATES INFORMATION AGENCY.......	150	-	-	-	-	150	-	-	-
VETERANS ADMINISTRATION................	285	-	-	-	-	-	-	-	285

TABLE C-64. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	ANTHRO-POLOGY	ECONOMICS	HISTORY	LIN-GUISTICS	POLITICAL SCIENCE	SOCIOLOGY	SOCIAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	149,734	713	58,396	118	178	3,658	25,365	61,306
DEPARTMENTS								
DEPARTMENT OF RICULTURE, TOTAL.......	23,594	-	22,468	106	-	-	867	153
AGRICULTURAL ESEARCH SERVICE..........	940	-	851	-	-	-	41	48
COOPERATIVE STATE RESEARCH SERVICE.....	8,416	-	7,970	-	-	-	446	-
ECONOMIC RESEARCH SERVICE..............	10,582	-	10,265	106	-	-	106	105
FARMER COOPERATIVE SERVICE.............	663	-	663	-	-	-	-	-
FOREST SERVICE.........................	2,739	-	2,465	-	-	-	274	-
STATISTICAL REPORTING SERVICE..........	254	-	254	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	6,459	-	6,063	-	-	-	396	-
BUREAU OF THE CENSUS...................	811	-	415	-	-	-	396	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	3,809	-	3,809	-	-	-	-	-
MARITIME ADMINISTRATION................	1,521	-	1,521	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	318	-	318	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	2,878	-	646	-	-	890	850	492
DEPARTMENT OF THE ARMY.................	2,154	-	425	-	-	855	814	60
DEFENSE AGENCIES.......................	398	-	-	-	-	-	-	398
DEPARTMENTWIDE FUNDS...................	326	-	221	-	-	35	36	34
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	61,840	711	-	-	178	-	10,415	50,536
HEALTH SERVICES & MENTAL HEALTH ADMIN..	9,736	711	-	-	-	-	8,564	461
NATIONAL INSTITUTES OF HEALTH..........	262	-	-	-	178	-	84	-
OFFICE OF CHILD DEVELOPMENT............	500	-	-	-	-	-	-	500
OFFICE OF EDUCATION....................	20,729	-	-	-	-	-	-	20,729
SOCIAL AND REHABILITATION SERVICE......	18,647	-	-	-	-	-	1,767	16,880
SOCIAL SECURITY ADMINISTRATION.........	11,966	-	-	-	-	-	-	11,966
DEPARTMENT OF THE INTERIOR, TOTAL......	1,144	-	726	10	-	141	156	111
BUREAU OF LAND MANAGEMENT..............	60	-	60	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION...........	92	-	62	-	-	5	20	5
BUREAU OF RECLAMATION..................	42	-	42	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	950	-	562	10	-	136	136	106
DEPARTMENT OF JUSTICE, TOTAL...........	2,536	-	-	-	-	95	1,087	1,354
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	399	-	-	-	-	-	399	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	2,137	-	-	-	-	95	688	1,354
DEPARTMENT OF LABOR, TOTAL.............	9,234	-	9,234	-	-	-	-	-
BUREAU OF LABOR STATISTICS.............	1,144	-	1,144	-	-	-	-	-
MANPOWER ADMINISTRATION................	5,874		5,874					

FARMER COOPERATIVE SERVICE..............	663	-	663	-	-	-	-	-
FOREST SERVICE..........................	2,739	-	2,465	-	-	-	274	-
STATISTICAL REPORTING SERVICE..........	254	-	254	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	6,459	-	6,063	-	-	-	396	-
BUREAU OF THE CENSUS....................	811	-	415	-	-	-	396	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	3,809	-	3,809	-	-	-	-	-
MARITIME ADMINISTRATION.................	1,521	-	1,521	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	318	-	318	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	2,878	-	646	-	-	890	850	492
DEPARTMENT OF THE ARMY..................	2,154	-	425	-	-	855	814	60
DEFENSE AGENCIES........................	398	-	-	-	-	-	-	398
DEPARTMENTWIDE FUNDS....................	326	-	221	-	-	35	36	34
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	61,840	711	-	-	178	-	10,415	50,536
HEALTH SERVICES & MENTAL HEALTH ADMIN..	9,736	711	-	-	-	-	8,564	461
NATIONAL INSTITUTES OF HEALTH..........	262	-	-	-	178	-	84	-
OFFICE OF CHILD DEVELOPMENT............	500	-	-	-	-	-	-	500
OFFICE OF EDUCATION.....................	20,729	-	-	-	-	-	-	20,729
SOCIAL AND REHABILITATION SERVICE......	18,647	-	-	-	-	-	1,767	16,880
SOCIAL SECURITY ADMINISTRATION.........	11,966	-	-	-	-	-	-	11,966
DEPARTMENT OF THE INTERIOR, TOTAL......	1,144	-	726	10	-	141	156	111
BUREAU OF LAND MANAGEMENT..............	60	-	60	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION...........	92	-	62	-	-	5	20	5
BUREAU OF RECLAMATION..................	42	-	42	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	950	-	562	10	-	136	136	106
DEPARTMENT OF JUSTICE, TOTAL...........	2,536	-	-	-	-	95	1,087	1,354
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	399	-	-	-	-	-	399	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	2,137	-	-	-	-	95	688	1,354
DEPARTMENT OF LABOR, TOTAL.............	9,234	-	9,234	-	-	-	-	-
BUREAU OF LABOR STATISTICS.............	1,144	-	1,144	-	-	-	-	-
MANPOWER ADMINISTRATION................	5,874	-	5,874	-	-	-	-	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,216	-	2,216	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	2,939	-	1,532	-	-	-	358	1,049
DEPARTMENTAL FUNDS.....................	125	-	-	-	-	-	-	125
AGENCY FOR INTERNATIONAL DEVELOPMENT...	2,814	-	1,532	-	-	-	358	924
DEPARTMENT OF TRANSPORTATION, TOTAL....	10,442	-	7,646	-	-	1,208	827	761
FEDERAL HIGHWAY ADMINISTRATION.........	1,061	-	424	-	-	-	637	-
FEDERAL RAILROAD ADMINISTRATION........	323	-	323	-	-	-	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,108	-	-	-	-	1,108	-	-
OFFICE OF THE SECRETARY................	6,805	-	6,461	-	-	-	-	344
URBAN MASS TRANSPORTATION ADMIN........	1,145	-	438	-	-	100	190	417
OTHER AGENCIES								
ADVISORY COMM ON INTERGOVT RELATIONS...	553	-	276	-	-	277	-	-
CIVIL AERONAUTICS BOARD................	263	-	263	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	521	-	377	-	-	-	63	81
FEDERAL HOME LOAN BANK BOARD...........	390	-	390	-	-	-	-	-
FEDERAL TRADE COMMISSION...............	388	-	388	-	-	-	-	-
NATIONAL SCIENCE FOUNDATION............	5,348	-	1,022	-	-	951	400	2,975
OFFICE OF ECONOMIC OPPORTUNITY.........	20,200	-	6,700	-	-	-	9,800	3,700
OFFICE OF SCIENCE AND TECHNOLOGY.......	11	2	2	2	-	3	1	1
SMALL BUSINESS ADMINISTRATION..........	101	-	101	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY.............	353	-	353	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	395	-	209	-	-	93	-	93
VETERANS ADMINISTRATION................	145	-	-	-	-	-	145	-

TABLE C-65. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	ANTHRO-POLOGY	ECONOMICS	HISTORY	LIN-GUISTICS	POLITICAL SCIENCE	SOCIOLOGY	SOCIAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	191,573	1,164	58,949	128	215	2,665	33,259	95,193
DEPARTMENTS								
DEPARTMENT OF AGRICULTURE, TOTAL.......	25,241	-	24,035	111	-	-	937	158
AGRICULTURAL RESEARCH SERVICE..........	936	-	849	-	-	-	40	47
COOPERATIVE STATE RESEARCH SERVICE.....	9,235	-	8,746	-	-	-	489	-
ECONOMIC RESEARCH SERVICE..............	11,138	-	10,804	111	-	-	112	111
FARMER COOPERATIVE SERVICE.............	709	-	709	-	-	-	-	-
FOREST SERVICE.........................	2,963	-	2,667	-	-	-	296	-
STATISTICAL REPORTING SERVICE..........	260	-	260	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	4,906	-	4,393	-	-	-	513	-
BUREAU OF THE CENSUS...................	1,049	-	536	-	-	-	513	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	1,844	-	1,844	-	-	-	-	-
MARITIME ADMINISTRATION................	1,588	-	1,588	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	425	-	425	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	2,436	-	628	-	-	555	968	285
DEPARTMENT OF THE ARMY.................	1,746	-	490	-	-	545	666	45
DEFENSE AGENCIES.......................	240	-	-	-	-	-	-	240
DEPARTMENTWIDE FUNDS...................	450	-	138	-	-	10	302	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	94,230	1,162	-	-	215	-	12,264	80,589
HEALTH SERVICES & MENTAL HEALTH ADMIN..	13,377	1,162	-	-	-	-	9,786	2,429
NATIONAL INSTITUTES OF HEALTH..........	318	-	-	-	215	-	103	-
OFFICE OF CHILD DEVELOPMENT............	1,000	-	-	-	-	-	500	500
OFFICE OF EDUCATION....................	50,308	-	-	-	-	-	-	50,308
SOCIAL AND REHABILITATION SERVICE......	16,145	-	-	-	-	-	1,875	14,270
SOCIAL SECURITY ADMINISTRATION.........	13,082	-	-	-	-	-	-	13,082
DEPARTMENT OF THE INTERIOR, TOTAL......	1,353	-	844	15	-	178	187	129
BUREAU OF LAND MANAGEMENT..............	57	-	57	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION...........	133	-	68	5	-	20	30	10
BUREAU OF RECLAMATION..................	65	-	65	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	1,098	-	654	10	-	158	157	119
DEPARTMENT OF JUSTICE, TOTAL...........	2,864	-	-	-	-	80	1,427	1,357
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	727	-	-	-	-	-	727	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	2,137	-	-	-	-	80	700	1,357
DEPARTMENT OF LABOR, TOTAL.............	9,917	-	9,917	-	-	-	-	-
BUREAU OF LABOR STATISTICS.............	1,154	-	1,154	-	-	-	-	-
MANPOWER ADMINISTRATION................	6,213	-	6,213	-	-	-	-	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,550	-	2,550	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	5,255	-	1,812	-	-	153	1,663	1,627
DEPARTMENTAL FUNDS.....................	350	-	-	-	-	-	-	350
AGENCY FOR INTERNATIONAL DEVELOPMENT...	4,905	-	1,812	-	-	153	1,663	1,277
DEPARTMENT OF TRANSPORTATION, TOTAL....	10,711	-	8,115	-	-	605	816	1,175
FEDERAL HIGHWAY ADMINISTRATION.........	1,113	-	445	-	-	-	668	-
FEDERAL RAILROAD ADMINISTRATION........	3,335	-	2,905	-	-	430	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	75	-	-	-	-	75	-	500
OFFICE OF THE SECRETARY................	4,900	-	4,400	-	-			

DEPARTMENT OF COMMERCE, TOTAL..........	4,906	-	4,393	-	-	-	513	
BUREAU OF THE CENSUS....................	1,049	-	536	-	-	-	513	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	1,844	-	1,844	-	-	-	-	-
MARITIME ADMINISTRATION.................	1,588	-	1,588	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	425	-	425	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	2,436	-	628	-	-	555	968	285
DEPARTMENT OF THE ARMY..................	1,746	-	490	-	-	545	666	45
DEFENSE AGENCIES........................	240	-	-	-	-	-	-	240
DEPARTMENTWIDE FUNDS....................	450	-	138	-	-	10	302	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	94,230	1,162	-	-	215	-	12,264	80,589
HEALTH SERVICES & MENTAL HEALTH ADMIN..	13,377	1,162	-	-	-	-	9,786	2,429
NATIONAL INSTITUTES OF HEALTH..........	318	-	-	-	215	-	103	-
OFFICE OF CHILD DEVELOPMENT............	1,000	-	-	-	-	-	500	500
OFFICE OF EDUCATION....................	50,308	-	-	-	-	-	-	50,308
SOCIAL AND REHABILITATION SERVICE......	16,145	-	-	-	-	-	1,875	14,270
SOCIAL SECURITY ADMINISTRATION.........	13,082	-						13,082
DEPARTMENT OF THE INTERIOR, TOTAL......	1,353	-	844	15	-	178	187	129
BUREAU OF LAND MANAGEMENT..............	57	-	57	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION...........	133	-	68	5	-	20	30	10
BUREAU OF RECLAMATION..................	65	-	65	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	1,098	-	654	10	-	158	157	119
DEPARTMENT OF JUSTICE, TOTAL...........	2,864	-	-	-	-	80	1,427	1,357
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	727	-	-	-	-	-	727	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	2,137	-	-	-	-	80	700	1,357
DEPARTMENT OF LABOR, TOTAL.............	9,917	-	9,917	-	-	-	-	-
BUREAU OF LABOR STATISTICS.............	1,154	-	1,154	-	-	-	-	-
MANPOWER ADMINISTRATION................	6,213	-	6,213	-	-	-	-	-
WORKPLACE STANDARDS ADMINISTRATION.....	2,550	-	2,550	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	5,255	-	1,812	-	-	153	1,663	1,627
DEPARTMENTAL FUNDS.....................	350	-	-	-	-	-	-	350
AGENCY FOR INTERNATIONAL DEVELOPMENT...	4,905	-	1,812	-	-	153	1,663	1,277
DEPARTMENT OF TRANSPORTATION, TOTAL....	10,711	-	8,115	-	-	605	816	1,175
FEDERAL HIGHWAY ADMINISTRATION.........	1,113	-	445	-	-	-	668	-
FEDERAL RAILROAD ADMINISTRATION........	3,335	-	2,905	-	-	430	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	75	-	-	-	-	75	-	-
OFFICE OF THE SECRETARY................	4,900	-	4,400	-	-	-	-	500
URBAN MASS TRANSPORTATION ADMIN........	1,288	-	365	-	-	100	148	675
OTHER AGENCIES								
ADVISORY COMM ON INTERGOVT RELATIONS...	477	-	215	-	-	262	-	-
CIVIL AERONAUTICS BOARD................	270	-	270	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY........	664	-	496	-	-	-	53	115
FEDERAL HOME LOAN BANK BOARD...........	388	-	388	-	-	-	-	-
FEDERAL TRADE COMMISSION...............	467	-	467	-	-	-	-	-
NATIONAL SCIENCE FOUNDATION............	6,370	-	1,088	-	-	738	430	4,114
OFFICE OF ECONOMIC OPPORTUNITY.........	24,850	-	5,500	-	-	-	13,850	5,500
OFFICE OF SCIENCE AND TECHNOLOGY.......	11	2	2	2	-	3	1	1
TENNESSEE VALLEY AUTHORITY.............	428	-	428	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY...	585	-	351	-	-	91	-	143
VETERANS ADMINISTRATION................	150	-	-	-	-	-	150	-

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TABLE C-66. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	ANTHRO-POLOGY	ECONOMICS	HISTORY	LIN-GUISTICS	POLITICAL SCIENCE	SOCIOLOGY	SOCIAL SCIENCES NEC
TOTAL, ALL AGENCIES....................	211,167	3,666	65,168	130	386	3,049	51,335	87,433
DEPARTMENTS								
DEPARTMENT OF AGRICULTURE, TOTAL.......	25,966	-	24,717	110	-	-	982	157
AGRICULTURAL RESEARCH SERVICE..........	937	-	850	-	-	-	40	47
COOPERATIVE STATE RESEARCH SERVICE.....	10,145	-	9,608	-	-	-	537	-
ECONOMIC RESEARCH SERVICE..............	10,954	-	10,625	110	-	-	109	110
FARMER COOPERATIVE SERVICE.............	707	-	707	-	-	-	-	-
FOREST SERVICE.........................	2,963	-	2,667	-	-	-	296	-
STATISTICAL REPORTING SERVICE..........	260	-	260	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	3,574	-	3,125	-	-	-	449	-
BUREAU OF THE CENSUS...................	918	-	469	-	-	-	449	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	1,591	-	1,591	-	-	-	-	-
MARITIME ADMINISTRATION................	550	-	550	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	515	-	515	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	6,317	25	868	-	-	760	4,314	350
DEPARTMENT OF THE ARMY.................	5,500	25	725	-	-	750	4,000	-
DEFENSE AGENCIES.......................	350	-	-	-	-	-	-	350
DEPARTMENTWIDE FUNDS...................	467	-	143	-	-	10	314	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	86,488	917	500	-	386	-	12,762	71,923
HEALTH SERVICES & MENTAL HEALTH ADMIN..	12,679	917	-	-	-	-	10,310	1,452
NATIONAL INSTITUTES OF HEALTH..........	363	-	-	-	246	-	117	-
OFFICE OF CHILD DEVELOPMENT............	2,000	-	500	-	-	-	500	1,000
OFFICE OF EDUCATION....................	45,430	-	-	-	140	-	-	45,290
SOCIAL AND REHABILITATION SERVICE......	12,210	-	-	-	-	-	1,835	10,375
SOCIAL SECURITY ADMINISTRATION.........	13,806	-	-	-	-	-	-	13,806
DEPARTMENT OF THE INTERIOR, TOTAL......	1,378	-	845	18	-	188	204	123
BUREAU OF LAND MANAGEMENT..............	58	-	58	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION...........	76	-	45	3	-	5	20	3
BUREAU OF RECLAMATION..................	80	-	80	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH.....	1,164	-	662	15	-	183	184	120
DEPARTMENT OF JUSTICE, TOTAL...........	5,146	-	-	-	-	240	2,206	2,700
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	471	-	-	-	-	-	471	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	4,675	-	-	-	-	240	1,735	2,700
DEPARTMENT OF LABOR, TOTAL.............	9,930	-	9,930	-	-	-	-	-
BUREAU OF LABOR STATISTICS.............	1,154	-	1,154	-	-	-	-	-
MANPOWER ADMINISTRATION................	6,243	-	6,243	-	-	-	-	-
WORKPLACE STANDARDS ADMINISTRATION.....	[illegible]	[illegible]	[illegible]	-	-	-	-	-

FOREST SERVICE	2,963	-	2,667	-	-	-	296	-
STATISTICAL REPORTING SERVICE	260	-	260	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL	3,574	-	3,125	-	-	-	449	-
BUREAU OF THE CENSUS	918	-	469	-	-	-	449	-
ECONOMIC DEVELOPMENT ADMINISTRATION	1,591	-	1,591	-	-	-	-	-
MARITIME ADMINISTRATION	550	-	550	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	515	-	515	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL	6,317	25	868	-	-	760	4,314	350
DEPARTMENT OF THE ARMY	5,500	25	725	-	-	750	4,000	-
DEFENSE AGENCIES	350	-	-	-	-	-	-	350
DEPARTMENTWIDE FUNDS	467	-	143	-	-	10	314	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	86,488	917	500	-	386	-	12,762	71,923
HEALTH SERVICES & MENTAL HEALTH ADMIN.	12,679	917	-	-	-	-	10,310	1,452
NATIONAL INSTITUTES OF HEALTH	363	-	-	-	246	-	117	-
OFFICE OF CHILD DEVELOPMENT	2,000	-	500	-	-	-	500	1,000
OFFICE OF EDUCATION	45,430	-	-	-	140	-	-	45,290
SOCIAL AND REHABILITATION SERVICE	12,210	-	-	-	-	-	1,835	10,375
SOCIAL SECURITY ADMINISTRATION	13,806	-	-	-	-	-	-	13,806
DEPARTMENT OF THE INTERIOR, TOTAL	1,378	-	845	18	-	188	204	123
BUREAU OF LAND MANAGEMENT	58	-	58	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION	76	-	45	3	-	5	20	3
BUREAU OF RECLAMATION	80	-	80	-	-	-	-	-
OFFICE OF WATER RESOURCES RESEARCH	1,164	-	662	15	-	183	184	120
DEPARTMENT OF JUSTICE, TOTAL	5,146	-	-	-	-	240	2,206	2,700
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	471	-	-	-	-	-	471	-
LAW ENFORCEMENT ASSISTANCE ADMIN	4,675	-	-	-	-	240	1,735	2,700
DEPARTMENT OF LABOR, TOTAL	9,930	-	9,930	-	-	-	-	-
BUREAU OF LABOR STATISTICS	1,154	-	1,154	-	-	-	-	-
MANPOWER ADMINISTRATION	6,243	-	6,243	-	-	-	-	-
WORKPLACE STANDARDS ADMINISTRATION	2,533	-	2,533	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL	7,080	-	2,789	-	-	250	1,886	2,155
DEPARTMENTAL FUNDS	650	-	-	-	-	-	-	650
AGENCY FOR INTERNATIONAL DEVELOPMENT	6,430	-	2,789	-	-	250	1,886	1,505
DEPARTMENT OF TRANSPORTATION, TOTAL	16,318	-	11,820	-	-	300	930	3,268
FEDERAL HIGHWAY ADMINISTRATION	1,300	-	520	-	-	-	780	-
FEDERAL RAILROAD ADMINISTRATION	3,985	-	3,685	-	-	200	100	-
OFFICE OF THE SECRETARY	9,575	-	7,250	-	-	-	-	2,325
URBAN MASS TRANSPORTATION ADMIN	1,458	-	365	-	-	100	50	943
OTHER AGENCIES								
ADVISORY COMM ON INTERGOVT RELATIONS	487	-	243	-	-	244	-	-
CIVIL AERONAUTICS BOARD	331	-	331	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY	806	-	609	-	-	-	51	146
FEDERAL HOME LOAN BANK BOARD	497	-	497	-	-	-	-	-
FEDERAL TRADE COMMISSION	460	-	460	-	-	-	-	-
NATIONAL SCIENCE FOUNDATION	8,802	2,722	900	-	-	970	600	3,610
OFFICE OF ECONOMIC OPPORTUNITY	36,200	-	6,400	-	-	-	26,800	3,000
OFFICE OF SCIENCE AND TECHNOLOGY	12	2	2	2	-	4	1	1
SMALL BUSINESS ADMINISTRATION	205	-	205	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY	386	-	386	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY	634	-	541	-	-	93	-	-
VETERANS ADMINISTRATION	150	-	-	-	-	-	150	-

TABLE C-67. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	
TOTAL, ALL AGENCIES	9,727,910	1,842,692	6,656,472	357,810	121,308	332,468	194,116	204,040	10,545	8,459
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL	9,232	8,263	726	-	119	-	124	-	-	-
AGRICULTURAL RESEARCH SERVICE	8,167	7,198	726	-	119	-	124	-	-	-
FOREST SERVICE	856	856	-	-	-	-	-	-	-	-
STATISTICAL REPORTING SERVICE	209	209	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL	27,457	11,986	11,358	-	1,312	-	290	-	2,216	295
BUREAU OF THE CENSUS	1,373	1,373	-	-	-	-	-	-	-	-
ECONOMIC DEVELOPMENT ADMINISTRATION	4,953	863	813	-	1,204	-	182	-	1,891	-
MARITIME ADMINISTRATION	7,673	6	7,667	-	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS	2,510	2,215	-	-	-	-	-	-	-	295
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	10,838	7,419	2,878	-	108	-	108	-	325	-
PATENT OFFICE	110	110	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL	5,803,585	1,413,358	4,053,123	11,235	33,063	101,094	59,333	126,960	-	5,419
DEPARTMENT OF THE ARMY	1,368,282	416,685	891,809	-	6,732	23,632	16,547	11,146	-	1,731
DEPARTMENT OF THE NAVY	1,984,986	551,551	1,352,241	-	20,388	51,071	6,302	-	-	3,433
DEPARTMENT OF THE AIR FORCE	2,324,957	394,164	1,752,914	-	4,128	26,170	33,762	113,564	-	255
DEFENSE AGENCIES	125,360	50,958	56,159	11,235	1,815	221	2,722	2,250	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	91,704	10,875	4,801	-	24,672	3,098	21,099	25,165	1,471	523
HEALTH SERVICES & MENTAL HEALTH ADMIN.	28,054	6,414	2,182	-	12,097	-	7,335	-	-	26
NATIONAL INSTITUTES OF HEALTH	4,485	682	1,892	-	1,556	98	186	59	-	12
OFFICE OF CHILD DEVELOPMENT	1,000	50	-	-	700	-	250	-	-	-
OFFICE OF EDUCATION	55,115	3,679	727	-	9,478	3,000	12,253	25,106	872	-
SOCIAL AND REHABILITATION SERVICE	3,050	50	-	-	841	-	1,075	-	599	485
DEPARTMENT OF HOUSING & URBAN DEVELOP.	22,843	3,654	15,076	300	510	-	2,057	165	1,081	-
DEPARTMENT OF THE INTERIOR, TOTAL	36,216	14,681	18,881	997	583	-	1,068	-	-	6
BONNEVILLE POWER ADMINISTRATION	1,269	699	504	-	60	-	-	-	-	6
BUREAU OF LAND MANAGEMENT	22	22	-	-	-	-	-	-	-	-
BUREAU OF MINES	12,563	8,713	3,850	-	-	-	-	-	-	-
BUREAU OF RECLAMATION	108	108	-	-	-	-	-	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE	1,967	1,967	-	-	-	-	-	-	-	-
OFFICE OF COAL RESEARCH	3,330	62	1,875	-	325	-	1,068	-	-	-
OFFICE OF SALINE WATER	16,957	3,110	12,652	997	198	-	-	-	-	-
DEPARTMENT OF JUSTICE, TOTAL	3,256	738	797	-	103	-	481	-	1,137	-
BUREAU OF PRISONS	200	160	5	-	-	-	10	-	25	-
FEDERAL BUREAU OF INVESTIGATION	197	115	82	-	-	-	-	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.	2,859	463	710	-	103	-	471	-	1,112	-
DEPARTMENT OF LABOR, TOTAL	9,301	3,021	805	-	2,013	-	2,335	-	1,127	-
BUREAU OF LABOR STATISTICS	1,249	1,249	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION	8,052	1,772	805	-	2,013	-	2,335	-	1,127	-

CONTINUED ON NEXT PAGE

TABLE C-67. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY IN-DUSTRIAL FIRMS	UNIVER-SITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTI-TUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTI-TUTIONS	OTHER	
POSTAL SERVICE	34,103	5,865	27,867	-	-	-	-	-	-	371
DEPARTMENT OF STATE, TOTAL	8,663	762	110	-	2,962	-	3,081	-	-	1,748
AGENCY FOR INTERNATIONAL DEVELOPMENT	8,661	762	110	-	2,960	-	3,081	-	-	1,748
PEACE CORPS	2	-	-	-	2	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL	229,059	32,397	189,573	-	298	-	597	2,932	3,262	-
FEDERAL AVIATION ADMINISTRATION	46,127	25,920	17,959	-	-	-	-	2,248	-	-
FEDERAL HIGHWAY ADMINISTRATION	4,237	975	-	-	-	-	-	-	3,262	-
FEDERAL RAILROAD ADMINISTRATION	6,797	200	5,615	-	298	-	-	684	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.	3,600	8	3,592	-	-	-	-	-	-	-
OFFICE OF THE SECRETARY	160,520	3,820	156,700	-	-	-	-	-	-	-
UNITED STATES COAST GUARD	4,508	1,467	2,984	-	-	-	57	-	-	-
URBAN MASS TRANSPORTATION ADMIN.	3,270	7	2,723	-	-	-	540	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL	324	324	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING	324	324	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION	912,872	12,692	296,472	343,016	3,742	203,312	4,871	48,573	151	43
CIVIL SERVICE COMMISSION	169	169	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY	35,522	7,486	21,846	-	3,261	1,048	1,681	140	60	-
GENERAL SERVICES ADMINISTRATION	110	28	82	-	-	-	-	-	-	-
LIBRARY OF CONGRESS	964	964	-	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	2,390,214	308,391	2,012,602	2,262	34,513	23,916	8,371	105	-	54
NATIONAL SCIENCE FOUNDATION	14,189	1,200	-	-	4,711	-	8,238	-	40	-
OFFICE OF ECONOMIC OPPORTUNITY	93,983	2,200	2,072	-	9,271	-	80,440	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY	929	929	-	-	-	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY	1,775	1,775	-	-	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY	513	503	10	-	-	-	-	-	-	-
UNITED STATES INFORMATION AGENCY	77	21	56	-	-	-	-	-	-	-
VETERANS ADMINISTRATION	850	410	215	-	175	-	50	-	-	-

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-68. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY IN-DUSTRIAL FIRMS	UNIVER-SITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTI-TUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTI-TUTIONS	OTHER	
TOTAL, ALL AGENCIES....................	9,392,086	1,826,683	6,313,073	406,538	145,869	334,136	168,279	162,481	22,639	12,388
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	10,147	9,625	404	-	56	-	62	-	-	-
AGRICULTURAL RESEARCH SERVICE..........	9,015	8,493	404	-	56	-	62	-	-	-
FOREST SERVICE.........................	917	917	-	-	-	-	-	-	-	-
STATISTICAL REPORTING SERVICE..........	215	215	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	29,811	12,831	13,307	-	2,114	-	344	-	954	261
BUREAU OF THE CENSUS...................	2,094	2,094	-	-	-	-	-	-	-	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	3,602	902	780	-	1,200	-	200	-	520	-
MARITIME ADMINISTRATION................	6,807	12	6,025	-	770	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	2,754	2,493	-	-	-	-	-	-	-	261
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	14,449	7,225	6,502	-	144	-	144	-	434	-
PATENT OFFICE..........................	105	105	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	5,940,884	1,425,392	4,176,175	6,200	27,864	113,067	51,214	126,419	9,467	5,086
DEPARTMENT OF THE ARMY.................	1,434,857	452,407	912,553	-	5,180	28,420	13,054	13,171	9,467	605
DEPARTMENT OF THE NAVY.................	1,968,894	574,610	1,311,515	-	13,651	58,814	6,033	-	-	4,271
DEPARTMENT OF THE AIR FORCE............	2,380,615	349,678	1,861,691	-	2,488	25,550	29,810	111,188	-	210
DEFENSE AGENCIES.......................	106,518	46,197	47,916	6,200	1,545	283	2,317	2,060	-	-
DEPARTMENTWIDE FUNDS...................	50,000	2,500	42,500	-	5,000	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	117,715	11,953	10,357	-	46,059	2,120	17,879	24,406	4,029	912
HEALTH SERVICES & MENTAL HEALTH ADMIN..	38,440	8,026	6,995	-	16,557	-	6,722	-	-	140
NATIONAL INSTITUTES OF HEALTH..........	7,780	700	1,949	-	4,449	100	570	-	-	12
OFFICE OF CHILD DEVELOPMENT............	3,500	175	-	-	1,600	-	1,725	-	-	-
OFFICE OF EDUCATION....................	64,615	3,002	1,413	-	22,586	2,020	7,987	24,406	3,201	-
SOCIAL AND REHABILITATION SERVICE......	3,380	50	-	-	867	-	875	-	828	760
DEPARTMENT OF HOUSING & URBAN DEVELOP..	37,563	6,085	26,670	300	1,202	-	2,175	-	1,131	-
DEPARTMENT OF THE INTERIOR, TOTAL......	50,521	15,811	29,471	1,000	1,461	-	2,600	-	-	178
BONNEVILLE POWER ADMINISTRATION........	2,185	1,253	693	-	61	-	-	-	-	178
BUREAU OF LAND MANAGEMENT..............	24	24	-	-	-	-	-	-	-	-
BUREAU OF MINES........................	19,993	8,993	11,000	-	-	-	-	-	-	-
BUREAU OF RECLAMATION..................	103	103	-	-	-	-	-	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	2,026	2,026	-	-	-	-	-	-	-	-
OFFICE OF COAL RESEARCH................	7,568	100	3,668	-	1,200	-	2,600	-	-	-
OFFICE OF SALINE WATER.................	18,410	3,300	13,910	1,000	200	-	-	-	-	-
OFFICE OF THE SECRETARY................	212	12	200	-	-	-	-	-	-	-
DEPARTMENT OF JUSTICE, TOTAL...........	3,845	718	1,491	-	103	-	395	-	1,138	-
BUREAU OF PRISONS......................	200	140	5	-	-	-	20	-	35	-
FEDERAL BUREAU OF INVESTIGATION........	795	115	680	-	-	-	-	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	2,850	463	806	-	103	-	375	-	1,103	-
DEPARTMENT OF LABOR, TOTAL.............	11,980	3,534	1,083	-	2,707	-	3,140	-	1,516	-
BUREAU OF LABOR STATISTICS.............	1,152	1,152	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	10,828	2,382	1,083	-	2,707	-	3,140	-	1,516	-

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TABLE C-68. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS	OTHER	
POSTAL SERVICE	39,579	5,745	33,834	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL	15,104	1,190	245	-	5,187	-	5,683	-	-	2,799
AGENCY FOR INTERNATIONAL DEVELOPMENT	15,104	1,190	245	-	5,187	-	5,683	-	-	2,799
DEPARTMENT OF TRANSPORTATION, TOTAL	325,854	38,126	277,233	-	1,128	-	1,514	3,970	3,883	-
FEDERAL AVIATION ADMINISTRATION	56,000	25,978	26,080	-	200	-	-	3,742	-	-
FEDERAL HIGHWAY ADMINISTRATION	4,848	1,115	-	-	-	-	-	-	3,733	-
FEDERAL RAILROAD ADMINISTRATION	9,871	600	8,462	-	581	-	-	228	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.	3,600	8	3,592	-	-	-	-	-	-	-
OFFICE OF THE SECRETARY	233,519	3,800	229,719	-	-	-	-	-	-	-
UNITED STATES COAST GUARD	9,700	1,200	8,000	-	-	-	500	-	-	-
URBAN MASS TRANSPORTATION ADMIN.	8,316	5,425	1,380	-	347	-	1,014	-	150	-
DEPARTMENT OF THE TREASURY, TOTAL	572	572	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING	572	572	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION	883,148	10,999	268,709	397,583	3,895	190,568	3,499	7,433	150	312
CIVIL SERVICE COMMISSION	171	171	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY	54,685	18,108	27,419	-	2,771	1,274	2,245	203	75	2,590
GENERAL SERVICES ADMINISTRATION	168	8	-	-	10	-	-	-	150	-
LIBRARY OF CONGRESS	1,509	1,509	-	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	1,770,163	255,194	1,444,789	1,455	36,487	27,107	4,831	50	-	250
NATIONAL SCIENCE FOUNDATION	17,715	3,013	-	-	6,930	-	7,626	-	146	-
OFFICE OF ECONOMIC OPPORTUNITY	76,450	2,293	1,530	-	7,645	-	64,982	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY	990	990	-	-	-	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY	1,857	1,857	-	-	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY	729	659	70	-	-	-	-	-	-	-
UNITED STATES INFORMATION AGENCY	26	26	-	-	-	-	-	-	-	-
VETERANS ADMINISTRATION	900	274	286	-	250	-	90	-	-	-

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-69. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY IN-DUSTRIAL FIRMS	UNIVER-SITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTI-TUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTI-TUTIONS	OTHER	
TOTAL, ALL AGENCIES....................	10,017,924	1,915,798	6,829,748	422,693	157,514	342,318	153,152	160,823	21,549	14,329
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	10,544	10,081	347	-	54	-	62	-	-	-
AGRICULTURAL RESEARCH SERVICE..........	9,403	8,940	347	-	54	-	62	-	-	-
FOREST SERVICE.........................	926	926	-	-	-	-	-	-	-	-
STATISTICAL REPORTING SERVICE..........	215	215	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	37,948	15,082	19,949	-	1,375	-	375	-	1,009	158
BUREAU OF THE CENSUS...................	1,631	1,631	-	-	-	-	-	-	-	-
ECONOMIC DEVELOPMENT ADMINISTRATION....	3,520	910	725	-	1,200	-	200	-	485	-
MARITIME ADMINISTRATION................	11,555	200	11,355	-	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	3,651	3,493	-	-	-	-	-	-	-	158
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	17,486	8,743	7,869	-	175	-	175	-	524	-
PATENT OFFICE..........................	105	105	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	6,698,482	1,538,546	4,821,185	6,200	26,358	120,929	44,794	130,998	3,700	5,772
DEPARTMENT OF THE ARMY.................	1,791,001	533,196	1,194,795	-	4,635	25,505	12,834	16,280	3,700	56
DEPARTMENT OF THE NAVY.................	2,223,274	607,169	1,519,103	-	13,058	71,224	6,104	1,200	-	5,416
DEPARTMENT OF THE AIR FORCE............	2,511,010	331,300	2,017,689	-	2,258	24,000	23,745	111,718	-	300
DEFENSE AGENCIES.......................	123,197	64,381	47,098	6,200	1,407	200	2,111	1,800	-	-
DEPARTMENTWIDE FUNDS...................	50,000	2,500	42,500	-	5,000	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	145,667	12,911	11,204	-	58,030	3,894	28,048	24,406	6,322	852
HEALTH SERVICES & MENTAL HEALTH ADMIN..	41,000	8,069	8,599	-	14,609	-	9,583	-	-	140
NATIONAL INSTITUTES OF HEALTH..........	14,039	843	1,439	-	10,380	300	1,065	-	-	12
OFFICE OF CHILD DEVELOPMENT............	13,000	520	-	-	5,140	-	7,340	-	-	-
OFFICE OF EDUCATION....................	75,163	3,429	1,166	-	27,326	3,594	9,320	24,406	5,922	-
SOCIAL AND REHABILITATION SERVICE......	2,465	50	-	-	575	-	740	-	400	700
DEPARTMENT OF HOUSING & URBAN DEVELOP..	36,260	5,439	27,153	300	1,818	-	1,213	-	337	-
DEPARTMENT OF THE INTERIOR, TOTAL......	59,923	20,159	36,628	1,000	1,011	-	1,000	-	-	125
BONNEVILLE POWER ADMINISTRATION........	2,598	1,325	1,242	-	31	-	-	-	-	-
BUREAU OF LAND MANAGEMENT..............	24	24	-	-	-	-	-	-	-	-
BUREAU OF MINES........................	27,219	13,219	14,000	-	-	-	-	-	-	-
BUREAU OF RECLAMATION..................	115	115	-	-	-	-	-	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	2,054	2,054	-	-	-	-	-	-	-	-
OFFICE OF COAL RESEARCH................	8,241	100	6,491	-	650	-	1,000	-	-	-
OFFICE OF SALINE WATER.................	19,275	3,300	14,775	1,000	200	-	-	-	-	-
OFFICE OF THE SECRETARY................	397	22	120	-	130	-	-	-	-	125
DEPARTMENT OF JUSTICE, TOTAL...........	8,743	1,397	2,538	-	1,500	-	320	-	2,988	-
BUREAU OF PRISONS......................	293	220	10	-	-	-	20	-	43	-
FEDERAL BUREAU OF INVESTIGATION........	450	115	335	-	-	-	-	-	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN.......	8,000	1,062	2,193	-	1,500	-	300	-	2,945	-
DEPARTMENT OF LABOR, TOTAL.............	12,220	3,587	1,107	-	2,767	-	3,210	-	1,549	-
BUREAU OF LABOR STATISTICS.............	1,152	1,152	-	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION................	11,068	2,435	1,107	-	2,767	-	3,210	-	1,549	-

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TABLE C-69. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRA-MURAL (1)	EXTRAMURAL							
			UNITED STATES AND TERRITORIES							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN. BY IN-DUSTRIAL FIRMS	UNIVER-SITIES & COLLEGES	FFRDCS ADMIN. BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTI-TUTIONS	FFRDCS ADMIN. BY NON-PROFIT INSTI-TUTIONS	OTHER	
POSTAL SERVICE	70,407	12,050	57,857	-	-	-	-	-	-	500
DEPARTMENT OF STATE, TOTAL	15,939	1,025	330	-	6,637	-	5,410	-	-	2,537
AGENCY FOR INTERNATIONAL DEVELOPMENT	15,939	1,025	330	-	6,637	-	5,410	-	-	2,537
DEPARTMENT OF TRANSPORTATION, TOTAL	299,244	29,139	261,110	587	-	-	3,640	400	4,368	-
FEDERAL AVIATION ADMINISTRATION	21,176	15,650	5,526	-	-	-	-	-	-	-
FEDERAL HIGHWAY ADMINISTRATION	5,673	1,305	-	-	-	-	-	-	4,368	-
FEDERAL RAILROAD ADMINISTRATION	7,760	874	5,899	587	-	-	-	400	-	-
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.	4,500	10	4,490	-	-	-	-	-	-	-
OFFICE OF THE SECRETARY	235,000	3,800	231,200	-	-	-	-	-	-	-
UNITED STATES COAST GUARD	11,195	1,500	8,795	-	-	-	900	-	-	-
URBAN MASS TRANSPORTATION ADMIN	13,940	6,000	5,200	-	-	-	2,740	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL	518	518	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING	518	518	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION	840,003	9,587	221,355	413,491	2,986	186,223	1,809	3,922	30	600
CIVIL SERVICE COMMISSION	183	183	-	-	-	-	-	-	-	-
ENVIRONMENTAL PROTECTION AGENCY	65,656	15,927	38,802	-	3,187	1,465	2,582	72	86	3,535
GENERAL SERVICES ADMINISTRATION	182	22	-	-	-	-	-	-	160	-
LIBRARY OF CONGRESS	2,741	2,741	-	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	1,626,538	225,412	1,328,617	1,115	38,538	29,807	2,774	25	-	250
NATIONAL SCIENCE FOUNDATION	24,250	6,000	-	-	7,250	-	9,000	1,000	1,000	-
OFFICE OF ECONOMIC OPPORTUNITY	57,400	1,722	1,148	-	5,740	-	48,790	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY	1,080	1,080	-	-	-	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY	1,970	1,970	-	-	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGENCY	1,076	936	105	-	-	-	35	-	-	-
UNITED STATES INFORMATION AGENCY	50	10	20	-	20	-	-	-	-	-
VETERANS ADMINISTRATION	900	274	293	-	243	-	90	-	-	-

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-70. FEDERAL FUNDS FOR R&D PLANT, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(MILLIONS OF DOLLARS)

AGENCY AND SUBDIVISION	OBLIGATIONS			EXPENDITURES		
	ACTUAL,1970	ESTIMATES		ACTUAL,1970	ESTIMATES	
		1971	1972		1971	1972
TOTAL, ALL AGENCIES	524.4	659.1	588.3	578.9	661.1	641.8
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL	5.3	8.9	3.7	13.6	9.9	10.7
AGRICULTURAL RESEARCH SERVICE	3.3	7.7	3.7	11.2	6.8	9.3
COOPERATIVE STATE RESEARCH SERVICE	1.0	-	-	1.4	1.4	.6
FOREST SERVICE	.9	1.2	-	1.0	1.7	.8
DEPARTMENT OF COMMERCE, TOTAL	3.9	8.5	3.6	5.1	6.7	5.6
NATIONAL BUREAU OF STANDARDS	1.2	3.8	.6	2.1	2.8	2.0
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	2.7	4.7	3.0	2.9	3.8	3.6
DEPARTMENT OF DEFENSE, TOTAL	140.6	161.8	160.4	140.8	163.3	154.1
DEPARTMENT OF THE ARMY	27.2	38.1	37.3	18.2	46.5	38.1
DEPARTMENT OF THE NAVY	18.2	36.5	37.7	21.6	30.0	31.3
DEPARTMENT OF THE AIR FORCE	59.2	50.6	56.4	61.5	50.2	51.1
DEFENSE AGENCIES	36.0	36.5	29.1	39.6	36.6	33.6
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	31.2	24.4	23.1	43.3	53.7	62.2
FOOD AND DRUG ADMINISTRATION	-	2.6	6.1	-	1.4	1.6
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	-	.2	-	.3	.3	.2
NATIONAL INSTITUTES OF HEALTH	19.9	21.6	17.0	41.1	42.3	47.5
OFFICE OF EDUCATION	11.3	-	-	1.9	9.6	12.9
DEPARTMENT OF THE INTERIOR, TOTAL	10.6	14.0	12.3	8.3	12.8	14.9
BONNEVILLE POWER ADMINISTRATION	.3	1.0	1.1	.1	1.3	.7
BUREAU OF SPORT FISHERIES AND WILDLIFE	.5	1.0	.3	.5	.9	.3
OFFICE OF COAL RESEARCH	7.8	6.8	8.7	6.1	9.0	9.8
OFFICE OF SALINE WATER	2.0	5.3	2.3	1.6	1.7	4.2
POSTAL SERVICE	*	1.1	.4	*	1.1	.4
DEPARTMENT OF STATE, TOTAL	.1	.3	.2	.1	.3	.2
AGENCY FOR INTERNATIONAL DEVELOPMENT	.1	.3	.2	.1	.3	.2
DEPARTMENT OF TRANSPORTATION, TOTAL	5.5	19.5	42.6	3.7	12.6	34.2
FEDERAL AVIATION ADMINISTRATION	.2	.3	2.5	.2	.3	2.5
FEDERAL HIGHWAY ADMINISTRATION	.1	.4	.4	.1	.4	.4
FEDERAL RAILROAD ADMINISTRATION	4.8	13.5	24.4	3.0	6.7	16.1
UNITED STATES COAST GUARD	.3	.2	10.3	.3	.1	10.1
URBAN MASS TRANSPORTATION ADMINISTRATION	-	5.1	5.0	-	5.1	5.0
DEPARTMENT OF THE TREASURY, TOTAL	*	*	*	*	*	*
BUREAU OF ENGRAVING AND PRINTING	*	*	*	*	*	*
OTHER AGENCIES						
ATOMIC ENERGY COMMISSION	265.9	353.4	243.0	270.0	312.3	271.6
ENVIRONMENTAL PROTECTION AGENCY	2.0	4.9	22.3	2.1	2.5	6.9
FEDERAL COMMUNICATIONS COMMISSION	*	*	*	*	*	*
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	33.4	25.0	56.3	56.6	50.6	43.0
NATIONAL SCIENCE FOUNDATION	23.3	21.6	18.9	31.2	29.3	27.6
SMITHSONIAN INSTITUTION	.1	.5	-	.2	.2	.4
TENNESSEE VALLEY AUTHORITY	*	.1	.2	*	.1	.2
VETERANS ADMINISTRATION	2.6	15.0	1.3	3.7	5.8	9.8

TABLE C-71. FEDERAL OBLIGATIONS FOR R&D PLANT, BY AGENCY AND PERFORMER OF THE RESEARCH AND DEVELOPMENT THE PLANT SUPPORTS, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	FEDERAL INTRA-MURAL	EXTRAMURAL							
			DOMESTIC							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY IN-DUSTRIAL FIRMS	UNIVER-SITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTI-TUTIONS	FFRDCS ADMIN BY NON-PROFIT INSTI-TUTIONS	OTHER	
TOTAL, ALL AGENCIES....................	524,448	166,003	41,425	60,866	56,114	169,016	4,740	24,100	2,085	99
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	5,250	4,250	-	-	995	-	5	-	-	-
AGRICULTURAL RESEARCH SERVICE..........	3,320	3,320	-	-	-	-	-	-	-	-
COOPERATIVE STATE RESEARCH SERVICE.....	1,000	-	-	-	995	-	5	-	-	-
FOREST SERVICE.........................	930	930	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	3,883	2,586	100	-	-	-	-	-	1,197	-
NATIONAL BUREAU OF STANDARDS...........	1,204	1,204	-	-	-	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	2,679	1,382	100	-	-	-	-	-	1,197	-
DEPARTMENT OF DEFENSE, TOTAL...........	140,581	117,839	12,111	75	10,256	240	60	-	-	-
DEPARTMENT OF THE ARMY.................	27,203	27,203	-	-	-	-	-	-	-	-
DEPARTMENT OF THE NAVY.................	18,212	18,212	-	-	-	-	-	-	-	-
DEPARTMENT OF THE AIR FORCE............	59,160	59,160	-	-	-	-	-	-	-	-
DEFENSE AGENCIES.......................	36,006	13,264	12,111	75	10,256	240	60	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	31,210	248	-	-	19,671	-	-	11,291	-	-
NATIONAL INSTITUTES OF HEALTH..........	19,919	248	-	-	19,671	-	-	-	-	-
OFFICE OF EDUCATION....................	11,291	-	-	-	-	-	-	11,291	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	10,610	706	5,532	-	500	-	3,822	-	50	-
BONNEVILLE POWER ADMINISTRATION........	305	305	-	-	-	-	-	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	451	401	-	-	-	-	-	-	50	-
OFFICE OF COAL RESEARCH................	7,822	-	3,500	-	500	-	3,822	-	-	-
OFFICE OF SALINE WATER.................	2,032	-	2,032	-	-	-	-	-	-	-
POSTAL SERVICE.........................	22	22	-	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	58	-	-	-	-	-	-	-	-	58
AGENCY FOR INTERNATIONAL DEVELOPMENT...	58	-	-	-	-	-	-	-	-	58
DEPARTMENT OF TRANSPORTATION, TOTAL....	5,470	5,470	-	-	-	-	-	-	-	-
FEDERAL AVIATION ADMINISTRATION........	240	240	-	-	-	-	-	-	-	-
FEDERAL HIGHWAY ADMINISTRATION.........	102	102	-	-	-	-	-	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	4,846	4,846	-	-	-	-	-	-	-	-
UNITED STATES COAST GUARD..............	282	282	-	-	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL......	15	15	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING.......	15	15	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION...............	265,900	602	22,792	60,791	5,286	164,368	145	11,875	-	41
ENVIRONMENTAL PROTECTION AGENCY........	1,957	1,067	890	-	-	-	-	-	-	-
FEDERAL COMMUNICATIONS COMMISSION......	10	10	-	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	33,416	30,457	-	-	-	2,959	-	-	-	-
NATIONAL SCIENCE FOUNDATION............	23,335	-	-	-	19,406	1,449	708	934	838	-
SMITHSONIAN INSTITUTION................	57	57	-	-	-	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY.............	40	40	-	-	-	-	-	-	-	-
VETERANS ADMINISTRATION................	2,634	2,634	-	-	-	-	-	-	-	-

TABLE C-72. FEDERAL OBLIGATIONS FOR R&D PLANT, BY AGENCY AND PERFORMER OF THE RESEARCH AND DEVELOPMENT THE PLANT SUPPORTS, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	FEDERAL INTRA-MURAL	EXTRAMURAL							
			DOMESTIC							FOREIGN
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN BY NON-PROFIT INSTITUTIONS	OTHER	
TOTAL, ALL AGENCIES....................	659,076	236,244	71,531	123,123	46,572	175,681	3,381	1,758	125	661
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	8,928	8,928	-	-	-	-	-	-	-	-
AGRICULTURAL RESEARCH SERVICE...........	7,743	7,743	-	-	-	-	-	-	-	-
FOREST SERVICE..........................	1,185	1,185	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL..........	8,507	8,507	-	-	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS...........	3,771	3,771	-	-	-	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	4,736	4,736	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	161,814	140,094	10,393	-	11,312	-	-	10	-	5
DEPARTMENT OF THE ARMY..................	38,148	38,148	-	-	-	-	-	-	-	-
DEPARTMENT OF THE NAVY..................	36,547	36,547	-	-	-	-	-	-	-	-
DEPARTMENT OF THE AIR FORCE.............	50,638	50,638	-	-	-	-	-	-	-	-
DEFENSE AGENCIES........................	36,481	14,761	10,393	-	11,312	-	-	10	-	5
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	24,369	9,746	-	-	14,623	-	-	-	-	-
FOOD AND DRUG ADMINISTRATION............	2,590	2,590	-	-	-	-	-	-	-	-
HEALTH SERVICES & MENTAL HEALTH ADMIN..	189	189	-	-	-	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH...........	21,590	6,967	-	-	14,623	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL......	14,016	1,848	8,618	-	877	-	2,573	-	100	-
BONNEVILLE POWER ADMINISTRATION.........	985	985	-	-	-	-	-	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE...	963	863	-	-	-	-	-	-	100	-
OFFICE OF COAL RESEARCH.................	6,800	-	3,350	-	877	-	2,573	-	-	-
OFFICE OF SALINE WATER..................	5,268	-	5,268	-	-	-	-	-	-	-
POSTAL SERVICE..........................	1,143	1,143	-	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL.............	323	-	-	-	-	-	-	-	-	323
AGENCY FOR INTERNATIONAL DEVELOPMENT...	323	-	-	-	-	-	-	-	-	323
DEPARTMENT OF TRANSPORTATION, TOTAL....	19,456	19,456	-	-	-	-	-	-	-	-
FEDERAL AVIATION ADMINISTRATION........	300	300	-	-	-	-	-	-	-	-
FEDERAL HIGHWAY ADMINISTRATION..........	400	400	-	-	-	-	-	-	-	-
FEDERAL RAILROAD ADMINISTRATION........	13,490	13,490	-	-	-	-	-	-	-	-
UNITED STATES COAST GUARD...............	191	191	-	-	-	-	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN........	5,075	5,075	-	-	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL......	15	15	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING.......	15	15	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION................	353,437	642	51,835	123,123	4,447	171,191	808	1,371	-	20
ENVIRONMENTAL PROTECTION AGENCY........	4,869	4,184	685	-	-	-	-	-	-	-
FEDERAL COMMUNICATIONS COMMISSION......	10	10	-	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN.....	24,950	24,950	-	-	-	-	-	-	-	-
NATIONAL SCIENCE FOUNDATION............	21,603	1,085	-	-	15,313	4,490	-	377	25	313
SMITHSONIAN INSTITUTION.................	529	529	-	-	-	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY..............	113	113	-	-	-	-	-	-	-	-
VETERANS ADMINISTRATION.................	14,994	14,994	-	-	-	-	-	-	-	-

TABLE C-73. FEDERAL OBLIGATIONS FOR R&D PLANT, BY AGENCY AND PERFORMER OF THE RESEARCH AND DEVELOPMENT THE PLANT SUPPORTS, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	FEDERAL INTRA-MURAL	EXTRAMURAL							
			DOMESTIC							
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY IN-DUSTRIAL FIRMS	UNIVER-SITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTI-TUTIONS	FFRDCS ADMIN BY NON-PROFIT INSTI-TUTIONS	OTHER	FOREIGN
TOTAL, ALL AGENCIES	588,277	289,227	52,227	74,279	32,443	133,936	3,570	1,820	125	650
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL	3,672	3,672	-	-	-	-	-	-	-	-
AGRICULTURAL RESEARCH SERVICE	3,672	3,672	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL	3,606	3,606	-	-	-	-	-	-	-	-
NATIONAL BUREAU OF STANDARDS	646	646	-	-	-	-	-	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	2,960	2,960	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL	160,381	143,522	11,104	-	5,615	125	-	10	-	5
DEPARTMENT OF THE ARMY	37,259	37,259	-	-	-	-	-	-	-	-
DEPARTMENT OF THE NAVY	37,710	37,710	-	-	-	-	-	-	-	-
DEPARTMENT OF THE AIR FORCE	56,357	56,357	-	-	-	-	-	-	-	-
DEFENSE AGENCIES	29,055	12,196	11,104	-	5,615	125	-	10	-	5
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	23,103	13,042	-	-	10,061	-	-	-	-	-
FOOD AND DRUG ADMINISTRATION	6,061	6,061	-	-	-	-	-	-	-	-
NATIONAL INSTITUTES OF HEALTH	17,042	6,981	-	-	10,061	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL	12,279	1,204	7,050	-	925	-	3,000	-	100	-
BONNEVILLE POWER ADMINISTRATION	1,054	1,054	-	-	-	-	-	-	-	-
BUREAU OF SPORT FISHERIES & WILDLIFE	250	150	-	-	-	-	-	-	100	-
OFFICE OF COAL RESEARCH	8,700	-	4,775	-	925	-	3,000	-	-	-
OFFICE OF SALINE WATER	2,275	-	2,275	-	-	-	-	-	-	-
POSTAL SERVICE	397	397	-	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL	221	-	-	-	-	-	-	-	-	221
AGENCY FOR INTERNATIONAL DEVELOPMENT	221	-	-	-	-	-	-	-	-	221
DEPARTMENT OF TRANSPORTATION, TOTAL	42,623	42,623	-	-	-	-	-	-	-	-
FEDERAL AVIATION ADMINISTRATION	2,503	2,503	-	-	-	-	-	-	-	-
FEDERAL HIGHWAY ADMINISTRATION	400	400	-	-	-	-	-	-	-	-
FEDERAL RAILROAD ADMINISTRATION	24,440	24,440	-	-	-	-	-	-	-	-
UNITED STATES COAST GUARD	10,280	10,280	-	-	-	-	-	-	-	-
URBAN MASS TRANSPORTATION ADMIN	5,000	5,000	-	-	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL	10	10	-	-	-	-	-	-	-	-
BUREAU OF ENGRAVING AND PRINTING	10	10	-	-	-	-	-	-	-	-
OTHER AGENCIES										
ATOMIC ENERGY COMMISSION	242,960	435	33,564	74,279	4,288	128,619	570	1,185	-	20
ENVIRONMENTAL PROTECTION AGENCY	22,309	21,800	509	-	-	-	-	-	-	-
FEDERAL COMMUNICATIONS COMMISSION	15	15	-	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	56,300	56,300	-	-	-	-	-	-	-	-
NATIONAL SCIENCE FOUNDATION	18,900	1,100	-	-	11,554	5,192	-	625	25	404
TENNESSEE VALLEY AUTHORITY	195	195	-	-	-	-	-	-	-	-
VETERANS ADMINISTRATION	1,306	1,306	-	-	-	-	-	-	-	-

TABLE C-74. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT TO FOREIGN PERFORMERS, BY REGION, COUNTRY, AND AGENCY, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

REGION AND COUNTRY	TOTAL	DEPARTMENT OF AGRICULTURE	DEPARTMENT OF DEFENSE	DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE		ATOMIC ENERGY COMMISSION	OTHER
				TOTAL	NATIONAL INSTITUTES OF HEALTH		
TOTAL, ALL COUNTRIES	40,228	5,494	10,197	15,639	9,777	681	8,217
EUROPE, TOTAL	13,996	1,993	4,339	5,542	2,693	212	1,910
AUSTRIA	49	-	25	-	-	19	5
BELGIUM	177	-	113	64	64	-	-
DENMARK	131	-	8	123	123	-	-
FINLAND	111	-	-	74	66	37	-
FRANCE	1,669	-	1,445	87	67	-	137
ICELAND	80	-	-	-	-	80	-
IRELAND	25	-	5	20	20	-	-
ITALY	647	103	163	352	273	25	4
NETHERLANDS	168	-	67	101	101	-	-
NORWAY	1,512	-	1,378	134	47	-	-
POLAND	1,524	718	-	806	654	-	-
SPAIN	73	-	15	8	8	25	25
SWEDEN	844	-	91	566	531	-	187
SWITZERLAND	312	-	-	265	51	-	47
UNITED KINGDOM, TOTAL	2,001	59	829	349	2[illegible]	10	754
ENGLAND	1,834	-	774	328	179	10	722
SCOTLAND	61	-	26	5	5	-	30
OTHER UNITED KINGDOM	106	59	29	16	16	-	2
WEST GERMANY	924	7	200	-	-	16	701
YUGOSLAVIA	3,749	1,106	-	2,593	488	-	50
ASIA, TOTAL	8,375	1,705	1,512	3,044	1,994	-	2,114
INDIA	3,609	1,124	1,139	1,049	464	-	297
INDONESIA	88	-	-	-	-	-	88
JAPAN	333	-	75	257	257	-	1
MALAYSIA	46	-	46	-	-	-	-
PAKISTAN	2,150	581	-	1,560	1,131	-	9
PHILIPPINES	625	-	24	49	49	-	552
TAIWAN	49	-	31	18	18	-	-
THAILAND	195	-	131	64	64	-	-
SOUTH VIETNAM	851	-	56	-	-	-	795
OTHER ASIA	429	-	10	47	11	-	372
NEAR EAST, TOTAL	7,141	1,742	507	3,861	2,352	32	999
GREECE	39	-	3	36	36	-	-
ISRAEL	6,560	1,719	354	3,456	2,067	32	999
LEBANON	231	-	150	81	81	-	-
UNITED ARAB REPUBLIC	311	23	-	288	168	-	-
AFRICA, TOTAL	962	54	10	390	305	-	508
KENYA	64	-	6	-	-	-	58
NIGERIA	488	-	-	38	38	-	450
UGANDA	161	-	-	161	161	-	-
UNION OF SOUTH AFRICA	106	-	-	106	106	-	-
OTHER AFRICA	143	54	4	85	-	-	-
LATIN AMERICA, TOTAL	3,983	-	701	948	948	166	2,168
ARGENTINA	148	-	28	104	104	16	-
BOLIVIA	57	-	57	-	-	-	-
BRAZIL	167	-	115	31	31	21	-
CHILE	1,584	-	18	26	26	-	1,540
COLOMBIA	426	-	16	135	135	-	275
COSTA RICA	174	-	-	12	12	129	33
EL SALVADOR	7	-	-	7	7	-	-
MEXICO	53	-	-	53	53	-	-
PANAMA	617	-	44	500	500	-	73
PERU	89	-	13	-	-	-	76
URUGUAY	39	-	3	36	36	-	-
VENEZUELA	17	-	-	17	17	-	-
OTHER LATIN AMERICA	605	-	407	27	27	-	171

UNITED KINGDOM, TOTAL	2,001	59	829	349	200	10	754
ENGLAND	1,834	-	774	328	179	10	722
SCOTLAND	61	-	26	5	5	-	30
OTHER UNITED KINGDOM	106	59	29	16	16	-	2
WEST GERMANY	924	7	200	-	-	16	701
YUGOSLAVIA	3,749	1,106	-	2,593	488	-	50
ASIA, TOTAL	8,375	1,705	1,512	3,044	1,994	-	2,114
INDIA	3,609	1,124	1,139	1,049	464	-	297
INDONESIA	88	-	-	-	-	-	88
JAPAN	333	-	75	257	257	-	1
MALAYSIA	46	-	46	-	-	-	-
PAKISTAN	2,150	581	-	1,560	1,131	-	9
PHILIPPINES	625	-	24	49	49	-	552
TAIWAN	49	-	31	18	18	-	-
THAILAND	195	-	131	64	64	-	-
SOUTH VIETNAM	851	-	56	-	-	-	795
OTHER ASIA	429	-	10	47	11	-	372
NEAR EAST, TOTAL	7,141	1,742	507	3,861	2,352	32	999
GREECE	39	-	3	36	36	-	-
ISRAEL	6,560	1,719	354	3,456	2,067	32	999
LEBANON	231	-	150	81	81	-	-
UNITED ARAB REPUBLIC	311	23	-	288	168	-	-
AFRICA, TOTAL	962	54	10	390	305	-	508
KENYA	64	-	6	-	-	-	58
NIGERIA	488	-	-	38	38	-	450
UGANDA	161	-	-	161	161	-	-
UNION OF SOUTH AFRICA	106	-	-	106	106	-	-
OTHER AFRICA	143	54	4	85	-	-	-
LATIN AMERICA, TOTAL	3,983	-	701	948	948	166	2,168
ARGENTINA	148	-	28	104	104	16	-
BOLIVIA	57	-	57	-	-	-	-
BRAZIL	167	-	115	31	31	21	-
CHILE	1,584	-	18	26	26	-	1,540
COLOMBIA	426	-	16	135	135	-	275
COSTA RICA	174	-	-	12	12	129	33
EL SALVADOR	7	-	-	7	7	-	-
MEXICO	53	-	-	53	53	-	-
PANAMA	617	-	44	500	500	-	73
PERU	89	-	13	-	-	-	76
URUGUAY	39	-	3	36	36	-	-
VENEZUELA	17	-	-	17	17	-	-
OTHER LATIN AMERICA	605	-	407	27	27	-	171
AUSTRALIA	445	-	21	138	138	227	59
CANADA	4,154	-	3,099	568	378	44	443
NEW ZEALAND	41	-	8	17	17	-	16
INTERNATIONAL ORGANIZATIONS	1,131	-	-	1,131	952	-	-

TABLE C-75. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT TO FOREIGN PERFORMERS, BY REGION, COUNTRY, AND AGENCY, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

REGION AND COUNTRY	TOTAL	DEPARTMENT OF AGRICULTURE	DEPARTMENT OF DEFENSE	DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE		ATOMIC ENERGY COMMISSION	OTHER
				TOTAL	NATIONAL INSTITUTES OF HEALTH		
TOTAL, ALL COUNTRIES	67,688	6,601	8,076	37,708	15,540	943	14,360
EUROPE, TOTAL	29,116	2,966	3,864	16,528	6,000	517	5,241
AUSTRIA	76	-	46	-	-	25	5
BELGIUM	197	-	136	60	60	-	1
DENMARK	125	-	10	115	115	-	-
FINLAND	98	1	-	60	60	37	-
FRANCE	735	4	557	78	65	-	96
ICELAND	79	-	-	-	-	79	-
IRELAND	45	-	25	20	20	-	-
ITALY	848	105	128	299	270	312	4
NETHERLANDS	631	1	530	100	100	-	-
NORWAY	881	-	798	70	45	13	-
POLAND	5,678	481	-	5,197	2,356	-	-
SPAIN	88	1	30	10	10	25	22
SWEDEN	773	1	25	560	525	-	187
SWITZERLAND	136	-	-	85	50	-	51
UNITED KINGDOM, TOTAL	2,934	109	1,508	445	195	10	862
ENGLAND	2,719	-	1,465	425	175	10	819
SCOTLAND	68	-	23	5	5	-	40
OTHER UNITED KINGDOM	147	109	20	15	15	-	3
WEST GERMANY	801	3	71	-	-	16	711
YUGOSLAVIA	14,991	2,260	-	9,429	2,129	-	3,302
ASIA, TOTAL	17,308	2,600	1,161	9,896	3,427	-	3,651
INDIA	8,770	1,446	588	6,087	2,254	-	649
INDONESIA	334	-	-	-	-	-	334
JAPAN	268	3	50	175	175	-	40
MALAYSIA	45	-	45	-	-	-	-
PAKISTAN	4,548	1,151	250	3,129	858	-	18
PHILIPPINES	991	-	2	50	50	-	939
TAIWAN	289	-	19	20	20	-	250
THAILAND	107	-	47	60	60	-	-
SOUTH VIETNAM	1,520	-	100	-	-	-	1,420
OTHER ASIA	436	-	60	375	10	-	1
NEAR EAST, TOTAL	6,735	784	193	5,016	2,636	32	710
GREECE	38	-	3	35	35	-	-
ISRAEL	5,020	716	190	3,372	1,850	32	710
LEBANON	75	-	-	75	75	-	-
TURKEY	1	1	-	-	-	-	-
UNITED ARAB REPUBLIC	1,601	67	-	1,534	676	-	-
AFRICA, TOTAL	5,180	251	8	3,533	1,077	-	1,388
KENYA	68	-	3	-	[illegible]	-	65

FINLAND	98	1	-	60	60	37	-
FRANCE	735	4	557	78	65	-	96
ICELAND	79	-	-	-	-	79	-
IRELAND	45	-	25	20	20	-	-
ITALY	848	105	128	299	270	312	4
NETHERLANDS	631	1	530	100	100	-	-
NORWAY	881	-	798	70	45	13	-
POLAND	5,678	481	-	5,197	2,356	-	-
SPAIN	88	1	30	10	10	25	22
SWEDEN	773	1	25	560	525	-	187
SWITZERLAND	136	-	-	85	50	-	51
UNITED KINGDOM, TOTAL	2,934	109	1,508	445	195	10	862
ENGLAND	2,719	-	1,465	425	175	10	819
SCOTLAND	68	-	23	5	5	-	40
OTHER UNITED KINGDOM	147	109	20	15	15	-	3
WEST GERMANY	801	3	71	-	-	16	* 711
YUGOSLAVIA	14,991	2,260	-	9,429	2,129	-	3,302
ASIA, TOTAL	17,308	2,600	1,161	9,896	3,427	-	3,651
INDIA	8,770	1,446	588	6,087	2,254	-	649
INDONESIA	334	-	-	-	-	-	334
JAPAN	268	3	50	175	175	-	40
MALAYSIA	45	-	45	-	-	-	-
PAKISTAN	4,548	1,151	250	3,129	858	-	18
PHILIPPINES	991	-	2	50	50	-	939
TAIWAN	289	-	19	20	20	-	250
THAILAND	107	-	47	60	60	-	-
SOUTH VIETNAM	1,520	-	100	-	-	-	1,420
OTHER ASIA	436	-	60	375	10	-	1
NEAR EAST, TOTAL	6,735	784	193	5,016	2,636	32	710
GREECE	38	-	3	35	35	-	-
ISRAEL	5,020	716	190	3,372	1,850	32	710
LEBANON	75	-	-	75	75	-	-
TURKEY	1	1	-	-	-	-	-
UNITED ARAB REPUBLIC	1,601	67	-	1,534	676	-	-
AFRICA, TOTAL	5,180	251	8	3,533	1,077	-	1,388
KENYA	68	-	3	-	-	-	65
NIGERIA	1,180	-	-	35	35	-	1,145
UGANDA	160	-	-	160	160	-	-
UNION OF SOUTH AFRICA	113	-	-	100	100	-	13
OTHER AFRICA	3,659	251	5	3,238	782	-	165
LATIN AMERICA, TOTAL	4,464	-	665	951	945	191	2,657
ARGENTINA	100	-	-	100	100	-	-
BRAZIL	165	-	103	30	30	32	-
CHILE	1,668	-	20	25	25	6	1,617
COLOMBIA	905	-	14	141	135	-	750
COSTA RICA	185	-	-	15	15	135	35
EL SALVADOR	5	-	-	5	5	-	-
MEXICO	55	-	-	55	55	-	-
PANAMA	647	-	71	500	500	-	76
PERU	115	-	57	-	-	18	40
URUGUAY	35	-	-	35	35	-	-
VENEZUELA	20	-	-	20	20	-	-
OTHER LATIN AMERICA	564	-	400	25	25	-	139
AUSTRALIA	360	-	18	130	130	163	49
CANADA	3,336	-	2,159	489	360	40	648
NEW ZEALAND	39	-	8	15	15	-	16
INTERNATIONAL ORGANIZATIONS	1,150	-	-	1,150	950	-	-

TABLE C-76. FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO FOREIGN PERFORMERS, BY REGION, COUNTRY, AND AGENCY, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

REGION AND COUNTRY	TOTAL	DEPARTMENT OF AGRICULTURE	DEPARTMENT OF DEFENSE	DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE		ATOMIC ENERGY COMMISSION	OTHER
				TOTAL	NATIONAL INSTITUTES OF HEALTH		
TOTAL, ALL COUNTRIES	14,622	3,942	1,552	6,075	5,892	176	2,877
EUROPE, TOTAL	4,063	1,370	685	1,605	1,511	100	303
AUSTRIA	30	-	25	-	-	-	5
BELGIUM	99	-	84	15	15	-	-
DENMARK	66	-	-	66	66	-	-
FINLAND	35	-	-	35	29	-	-
FRANCE	100	-	25	33	18	-	42
ICELAND	59	-	-	-	-	59	-
IRELAND	5	-	5	-	-	-	-
ITALY	268	103	128	8	4	25	4
NETHERLANDS	27	-	27	-	-	-	-
NORWAY	8	-	8	-	-	-	-
POLAND	1,167	513	-	654	654	-	-
SPAIN	41	-	15	1	1	-	25
SWEDEN	395	-	46	229	199	-	120
SWITZERLAND	47	-	-	-	-	-	47
UNITED KINGDOM, TOTAL	466	43	286	78	39	-	59
ENGLAND	365	-	260	78	39	-	27
SCOTLAND	56	-	26	-	-	-	30
OTHER UNITED KINGDOM	45	43	-	-	-	-	2
WEST GERMANY	60	7	36	-	-	16	1
YUGOSLAVIA	1,190	704	-	486	486	-	-
ASIA, TOTAL	3,335	1,357	124	1,659	1,659	-	195
INDIA	1,469	826	-	450	450	-	193
JAPAN	121	-	69	51	51	-	1
MALAYSIA	24	-	24	-	-	-	-
PAKISTAN	1,662	531	-	1,131	1,131	-	-
TAIWAN	40	-	31	9	9	-	-
THAILAND	18	-	-	18	18	-	-
OTHER ASIA	1	-	-	-	-	-	1
NEAR EAST, TOTAL	3,937	1,161	315	2,028	1,997	32	401
GREECE	3	-	3	-	-	-	-
ISRAEL	3,707	1,138	312	1,824	1,793	32	401
LEBANON	36	-	-	36	36	-	-
UNITED ARAB REPUBLIC	191	23	-	168	168	-	-
AFRICA, TOTAL	150	54	-	38	38	-	58
KENYA	58	-	-	-	-	-	58
NIGERIA	38	-	-	38	38	-	-
OTHER AFRICA	54	54	-	-	-	-	-
LATIN AMERICA, TOTAL	2,409	-	152	544	544	32	1,681
ARGENTINA	73	-	28	34	34	11	-
BOLIVIA	11	-	11	-	-	-	-
BRAZIL	120	-	92	7	7	21	-
CHILE	1,558	-	18	-	-	-	1,540
COSTA RICA	33	-	-	-	-	-	33
MEXICO	3	-	-	3	3	-	-
PANAMA	500	-	-	500	500	-	-

TABLE C-77. FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO FOREIGN PERFORMERS, BY REGION, COUNTRY, AND AGENCY, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

REGION AND COUNTRY	TOTAL	DEPARTMENT OF AGRICULTURE	DEPARTMENT OF DEFENSE	DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE		ATOMIC ENERGY COMMISSION	OTHER
				TOTAL	NATIONAL INSTITUTES OF HEALTH		
TOTAL, ALL COUNTRIES	21,659	4,696	1,319	11,932	11,770	116	3,596
EUROPE, TOTAL	8,726	2,187	686	4,943	4,843	73	837
AUSTRIA	41	-	36	-	-	-	5
BELGIUM	96	-	81	14	14	-	1
DENMARK	59	-	-	59	59	-	-
FINLAND	28	1	-	27	27	-	-
FRANCE	93	4	57	31	18	-	1
ICELAND	32	-	-	-	-	32	-
IRELAND	10	-	10	-	-	-	-
ITALY	255	105	113	8	4	25	4
NETHERLANDS	31	1	30	-	-	-	-
NORWAY	8	-	8	-	-	-	-
POLAND	2,688	332	-	2,356	2,356	-	-
SPAIN	55	1	30	2	2	-	22
SWEDEN	354	1	-	233	198	-	120
SWITZERLAND	51	-	-	-	-	-	51
UNITED KINGDOM, TOTAL	495	79	265	86	38	-	65
ENGLAND	350	-	242	86	38	-	22
SCOTLAND	63	-	23	-	-	-	40
OTHER UNITED KINGDOM	82	79	-	-	-	-	3
WEST GERMANY	86	3	56	-	-	16	11
YUGOSLAVIA	4,344	1,660	-	2,127	2,127	-	557
ASIA, TOTAL	5,449	1,728	107	3,147	3,147	-	467
INDIA	3,532	824	15	2,239	2,239	-	454
JAPAN	88	3	50	23	23	-	12
MALAYSIA	23	-	23	-	-	-	-
PAKISTAN	1,759	901	-	858	858	-	-
TAIWAN	29	-	19	10	10	-	-
THAILAND	17	-	-	17	17	-	-
OTHER ASIA	1	-	-	-	-	-	1
NEAR EAST, TOTAL	3,410	530	193	2,322	2,287	32	333
GREECE	3	-	3	-	-	-	-
ISRAEL	2,630	462	190	1,613	1,578	32	333
LEBANON	33	-	-	33	33	-	-
TURKEY	1	1	-	-	-	-	-
UNITED ARAB REPUBLIC	743	67	-	676	676	-	-
AFRICA, TOTAL	1,146	251	-	817	817	-	78
KENYA	65	-	-	-	-	-	65
NIGERIA	35	-	-	35	35	-	-
UNION OF SOUTH AFRICA	13	-	-	-	-	-	13
OTHER AFRICA	1,033	251	-	782	782	-	-
LATIN AMERICA, TOTAL	2,397	-	115	549	543	11	1,722
ARGENTINA	33	-	-	33	33	-	-
BRAZIL	93	-	75	7	7	11	-
CHILE	1,637	-	20	-	-	-	1,617
COLOMBIA	6	-	-	6	-	-	-
COSTA RICA	35	-	-	-	-	-	35
MEXICO	3	-	-	3	3	-	-
PANAMA	500	-	-	500	500	-	-
PERU	60	-	20	-	-	-	40
OTHER LATIN AMERICA	30	-	-	-	-	-	30
AUSTRALIA	113	-	18	46	46	-	49
CANADA	391	-	192	105	84	-	94
NEW ZEALAND	27	-	8	3	3	-	16

TABLE C-78. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT TO FOREIGN PERFORMERS AND AMOUNT SUPPORTED THROUGH THE SPECIAL FOREIGN CURRENCY PROGRAM, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	ACTUAL, 1970		ESTIMATES			
			1971		1972	
	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM
TOTAL, ALL AGENCIES	40,228	17,259	67,688	44,454	76,138	55,134
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL	5,494	5,494	6,601	6,601	11,200	11,200
AGRICULTURAL RESEARCH SERVICE	4,867	4,867	5,976	5,976	10,000	10,000
FOREST SERVICE	627	627	625	625	1,200	1,200
DEPARTMENT OF COMMERCE, TOTAL	1,577	1,251	1,556	1,370	1,234	1,059
NATIONAL BUREAU OF STANDARDS	701	696	626	615	360	360
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	876	555	930	755	874	699
DEPARTMENT OF DEFENSE, TOTAL	10,197	1,146	8,076	883	8,694	3,169
DEPARTMENT OF THE ARMY	3,006	-	1,792	-	1,124	-
DEPARTMENT OF THE NAVY	3,696	1,146	4,410	883	5,525	3,169
DEPARTMENT OF THE AIR FORCE	1,324	-	1,128	-	1,150	-
DEFENSE AGENCIES	2,171	-	746	-	895	-
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	15,639	9,368	37,708	31,853	39,825	33,666
FOOD AND DRUG ADMINISTRATION	476	476	2,027	2,027	5,142	5,142
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	2,947	1,963	15,916	15,161	9,843	8,984
NATIONAL INSTITUTES OF HEALTH	9,777	4,503	15,540	10,440	14,090	8,790
OFFICE OF EDUCATION	13	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE	2,426	2,426	4,225	4,225	10,000	10,000
SOCIAL SECURITY ADMINISTRATION	-	-	-	-	750	750
DEPARTMENT OF THE INTERIOR, TOTAL	6	-	178	-	500	500
BONNEVILLE POWER ADMINISTRATION	6	-	178	-	-	-
OFFICE OF THE SECRETARY	-	-	-	-	500	500
POSTAL SERVICE	371	-	-	-	500	-
DEPARTMENT OF STATE, TOTAL	2,437	-	5,318	-	4,787	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	2,437	-	5,318	-	4,787	-
DEPARTMENT OF TRANSPORTATION, TOTAL	-	-	48	-	-	-
FEDERAL RAILROAD ADMINISTRATION	-	-	48	-	-	-
OTHER AGENCIES						
ATOMIC ENERGY COMMISSION	681	-	943	-	1,227	-
ENVIRONMENTAL PROTECTION AGENCY	674	-	3,870	3,147	4,571	4,340
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	1,388	-	1,503	-	1,504	-
NATIONAL SCIENCE FOUNDATION	1,764	-	1,887	600	2,096	1,200

TABLE C-79. FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO FOREIGN PERFORMERS AND AMOUNT SUPPORTED THROUGH THE SPECIAL FOREIGN CURRENCY PROGRAM, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	ACTUAL, 1970		ESTIMATES			
			1971		1972	
	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM
TOTAL, ALL AGENCIES	14,622	9,000	21,659	17,048	23,834	19,506
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL	3,942	3,942	4,696	4,696	8,012	8,012
AGRICULTURAL RESEARCH SERVICE	3,315	3,315	4,071	4,071	6,812	6,812
FOREST SERVICE	627	627	625	625	1,200	1,200
DEPARTMENT OF COMMERCE, TOTAL	876	555	931	755	864	699
NATIONAL BUREAU OF STANDARDS	-	-	11	-	-	-
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	876	555	920	755	864	699
DEPARTMENT OF DEFENSE, TOTAL	1,552	-	1,319	-	1,349	-
DEPARTMENT OF THE ARMY	591	-	707	-	790	-
DEPARTMENT OF THE NAVY	263	-	139	-	109	-
DEPARTMENT OF THE AIR FORCE	698	-	473	-	450	-
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	6,075	4,503	11,932	10,440	10,368	8,790
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	183	-	162	-	193	-
NATIONAL INSTITUTES OF HEALTH	5,892	4,503	11,770	10,440	10,175	8,790
OTHER AGENCIES						
ATOMIC ENERGY COMMISSION	176	-	116	-	120	-
ENVIRONMENTAL PROTECTION AGENCY	33	-	588	557	836	805
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	204	-	190	-	189	-
NATIONAL SCIENCE FOUNDATION	1,764	-	1,887	600	2,096	1,200

TABLE C-80. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH TO FOREIGN PERFORMERS AND AMOUNT SUPPORTED THROUGH THE SPECIAL FOREIGN CURRENCY PROGRAM, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	ACTUAL, 1970		ESTIMATES			
			1971		1972	
	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM
TOTAL, ALL AGENCIES	17,147	6,333	33,641	22,912	37,975	27,941
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL	1,552	1,552	1,905	1,905	3,188	3,188
AGRICULTURAL RESEARCH SERVICE	1,552	1,552	1,905	1,905	3,188	3,188
DEPARTMENT OF COMMERCE, TOTAL	406	401	364	354	212	202
NATIONAL BUREAU OF STANDARDS	406	401	354	354	202	202
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	-	-	10	-	10	-
DEPARTMENT OF DEFENSE, TOTAL	3,226	-	1,671	-	1,573	-
DEPARTMENT OF THE ARMY	684	-	480	-	278	-
DEPARTMENT OF THE AIR FORCE	371	-	445	-	400	-
DEFENSE AGENCIES	2,171	-	746	-	895	-
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	9,041	4,380	24,864	20,653	28,605	24,176
FOOD AND DRUG ADMINISTRATION	476	476	2,027	2,027	5,142	5,142
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	2,738	1,963	15,614	15,161	9,510	8,984
NATIONAL INSTITUTES OF HEALTH	3,873	-	3,758	-	3,903	-
OFFICE OF EDUCATION	13	-	-	-	-	-
SOCIAL AND REHABILITATION SERVICE	1,941	1,941	3,465	3,465	9,300	9,300
SOCIAL SECURITY ADMINISTRATION	-	-	-	-	750	750
DEPARTMENT OF THE INTERIOR, TOTAL	-	-	-	-	375	375
OFFICE OF THE SECRETARY	-	-	-	-	375	375
DEPARTMENT OF STATE, TOTAL	689	-	2,519	-	2,250	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	689	-	2,519	-	2,250	-
DEPARTMENT OF TRANSPORTATION, TOTAL	-	-	48	-	-	-
FEDERAL RAILROAD ADMINISTRATION	-	-	48	-	-	-
OTHER AGENCIES						
ATOMIC ENERGY COMMISSION	462	-	515	-	507	-
ENVIRONMENTAL PROTECTION AGENCY	641	-	692	-	200	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	1,130	-	1,063	-	1,065	-

TABLE C-81. FEDERAL OBLIGATIONS FOR DEVELOPMENT TO FOREIGN PERFORMERS AND AMOUNT SUPPORTED THROUGH THE SPECIAL FOREIGN CURRENCY PROGRAM, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	ACTUAL, 1970		ESTIMATES			
			1971		1972	
	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM	TOTAL	SPECIAL FOREIGN CURRENCY PROGRAM
TOTAL, ALL AGENCIES	8,459	1,926	12,388	4,494	14,329	7,687
DEPARTMENTS						
DEPARTMENT OF COMMERCE, TOTAL	295	295	261	261	158	158
NATIONAL BUREAU OF STANDARDS	295	295	261	261	158	158
DEPARTMENT OF DEFENSE, TOTAL	5,419	1,146	5,086	883	5,772	3,169
DEPARTMENT OF THE ARMY	1,731	-	605	-	56	-
DEPARTMENT OF THE NAVY	3,433	1,146	4,271	883	5,416	3,169
DEPARTMENT OF THE AIR FORCE	255	-	210	-	300	-
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	523	485	912	760	852	700
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	26	-	140	-	140	-
NATIONAL INSTITUTES OF HEALTH	12	-	12	-	12	-
SOCIAL AND REHABILITATION SERVICE	485	485	760	760	700	700
DEPARTMENT OF THE INTERIOR, TOTAL	6	-	178	-	125	125
BONNEVILLE POWER ADMINISTRATION	6	-	178	-	-	-
OFFICE OF THE SECRETARY	-	-	-	-	125	125
POSTAL SERVICE	371	-	-	-	500	-
DEPARTMENT OF STATE, TOTAL	1,748	-	2,799	-	2,537	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	1,748	-	2,799	-	2,537	-
OTHER AGENCIES						
ATOMIC ENERGY COMMISSION	43	-	312	-	600	-
ENVIRONMENTAL PROTECTION AGENCY	-	-	2,590	2,590	3,535	3,535
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	54	-	250	-	250	-

Table C-82. Federal obligations for research, development, and R&D plant, by geographic division and State, fiscal year 1970

[Dollars in thousands]

Geographic division and State	Research, development, and R&D plant	Research and development	R&D plant
United States, total	$15,500,365	$14,980,751	$519,614
New England	1,015,810	1,000,840	14,970
Connecticut	162,792	160,027	2,765
Maine	13,384	13,262	122
Massachusetts	771,597	760,920	10,677
New Hampshire	27,310	27,268	42
Rhode Island	31,237	29,911	1,326
Vermont	9,490	9,452	38
Middle Atlantic	2,568,394	2,516,881	51,513
New Jersey	748,157	742,526	5,631
New York	1,262.261	1,235,594	26,667
Pennsylvania	557,976	538,761	19,215
East North Central	1,158,647	1,038,771	119,876
Illinois	334,302	239,563	94,739
Indiana	92,323	91,905	418
Michigan	166,625	162,818	3,807
Ohio	477,654	457,342	20,312
Wisconsin	87,743	87,143	600
West North Central	484,638	475,375	9,263
Iowa	33,813	32,661	1,152
Kansas	16,731	16,646	85
Minnesota	110,048	109,270	778
Missouri	295,428	291,181	4,247
Nebraska	11,506	10,648	858
North Dakota	8,944	8,878	66
South Dakota	8,168	6,091	2,077
South Atlantic	2,971,532	2,899,229	72,303
Delaware	16,311	16,299	12
District of Columbia	474,918	468,493	6,425
Florida	858,025	824,785	33,240
Georgia	74,291	72,265	2,026
Maryland	1,083,641	1,063,359	20,282
North Carolina	67,052	63,908	3,144
South Carolina	19,558	17,804	1,754
Virginia	356,234	352,685	3,549
West Virginia	21,502	19,631	1,871
East South Central	616,511	599,724	16,787
Alabama	359,006	357,221	1,785
Kentucky	21,226	20,413	813
Mississippi	29,088	28,276	812
Tennessee	207,191	193,814	13,377
West South Central	844,244	834,880	9,364
Arkansas	9,862	9,787	75
Louisiana	147,577	146,488	1,089
Oklahoma	29,610	29,483	127
Texas	657,195	649,122	8,073
Mountain	1,249,187	1,136,820	112,367
Arizona	74,436	72,803	1,633
Colorado	279,325	274,113	5,212
Idaho	98,051	75,008	23,043
Montana	11,694	11,646	48
Nevada	208,171	190,948	17,223
New Mexico	507,695	444,089	63,606
Utah	62,026	61,052	974
Wyoming	7,789	7,161	628
Pacific	4,508,557	4,404,125	104,432
Alaska	43,638	43,179	459
California	3,956,981	3,871,053	85,928
Hawaii	44,321	43,815	506
Oregon	36,117	33,848	2,269
Washington	427,500	412,230	15,270
Outlying Areas	20,737	17,280	3,457
Offices Abroad	62,108	56,826	5,282

TABLE C-83. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY STATE AND PERFORMER

FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

STATE (IN ORDER OF TOTAL FEDERAL R&D OBLIGATIONS)	TOTAL	FEDERAL INTRAMURAL (1)	EXTRAMURAL						
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY INDUSTRIAL FIRMS	UNIVER-SITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NONPROFIT INSTI-TUTIONS	FFRDCS ADMIN BY NONPROFIT INSTI-TUTIONS	OTHER
TOTAL, ALL STATES	14,980,751	3,729,333	7,862,204	430,403	1,438,415	748,391	435,596	247,771	88,638
CALIFORNIA	3,871,053	547,625	2,607,021	31,723	205,835	308,257	63,179	96,531	10,882
NEW YORK	1,235,594	77,786	791,155	52,157	166,690	58,909	71,695	3,484	13,718
MARYLAND	1,063,359	659,019	295,838	-	40,071	52,449	6,233	5,540	4,209
FLORIDA	824,785	321,497	467,791	-	31,106	-	2,399	-	1,992
MASS	760,920	116,626	344,814	-	150,649	61,842	43,786	39,486	3,717
NEW JERSEY	742,526	152,773	544,941	-	23,791	11,588	6,731	-	2,702
TEXAS	649,122	170,034	407,498	-	58,997	-	6,163	2,262	4,168
PENN	538,761	103,077	272,659	56,852	68,234	9,092	21,458	3,397	3,992
DIST OF COL	468,493	326,455	70,214	-	16,945	1,532	47,920	-	5,427
OHIO	457,342	204,982	170,399	4,777	41,328	-	33,009	-	2,847
NEW MEXICO	444,089	138,774	50,555	137,507	9,942	99,819	6,146	956	390
WASHINGTON	412,230	18,836	297,525	338	33,229	2,540	4,293	53,542	1,927
ALABAMA	357,221	176,435	164,500	-	12,116	-	3,642	-	528
VIRGINIA	352,685	218,182	83,401	-	16,134	1,161	6,934	25,534	1,339
MISSOURI	291,181	15,900	237,707	-	27,703	-	4,885	4,210	776
COLORADO	274,113	41,189	181,669	-	29,156	12,968	7,930	-	1,201
ILLINOIS	239,563	27,253	22,221	-	81,289	76,933	27,936	473	3,458
TENNESSEE	193,814	9,233	74,785	82,224	19,449	1,868	5,513	-	742
NEVADA	190,948	35,302	138,593	3,956	2,711	9,746	369	-	271
MICHIGAN	162,818	25,111	81,355	-	49,894	-	4,295	-	2,163
CONNECTICUT	160,027	27,919	103,593	-	25,713	-	2,148	-	654
LOUISIANA	146,488	19,010	107,902	-	15,286	-	2,344	-	1,946
MINNESOTA	109,270	7,988	67,755	-	24,866	-	6,518	958	1,185
INDIANA	91,905	14,016	51,508	-	24,666	-	1,154	-	561
WISCONSIN	87,143	9,335	30,192	-	37,840	2,578	6,513	-	685
IDAHO	75,008	4,661	-	52,092	1,821	13,443	133	2,429	429
ARIZONA	72,803	31,606	23,804	-	8,608	6,419	1,852	-	514
GEORGIA	72,265	21,943	21,635	-	22,603	339	3,843	720	1,182
N CAROLINA	63,908	12,963	5,632	-	37,148	-	6,162	1,152	851
UTAH	61,052	21,712	19,047	-	15,689	656	3,249	-	699
HAWAII	43,815	9,231	21,149	-	10,756	-	1,833	-	846
ALASKA	43,179	10,849	23,886	-	5,586	-	1,187	-	1,671
OREGON	33,848	8,338	127	-	14,898	596	6,401	1,841	1,647
IOWA	32,661	5,976	3,381	-	14,781	7,476	528	-	519
RHODE ISL	29,911	11,553	7,207	-	9,637	-	1,164	-	350
OKLAHOMA	29,483	12,164	4,538	-	8,230	-	3,837	-	714
MISSISSIPPI	28,276	16,918	1,631	-	6,121	-	2,991	-	615
NEW HAMP	27,268	4,236	15,614	-	7,133	-	35	-	250
KENTUCKY	20,413	9,237	737	-	9,191	-	631	-	617
W VIRGINIA	19,631	5,818	770	-	5,475	5,180	566	1,126	696
S CAROLINA	17,804	2,739	154	8,777	4,738	-	1,050	-	[illegible]
KANSAS	16,646	2,495	2,512						

NEW JERSEY	742,526	152,773	544,941	-	23,791	11,588	6,731	-	2,702
TEXAS	649,122	170,034	407,498	-	58,997	-	6,163	2,262	4,168
PENN	538,761	103,077	272,659	56,852	68,234	9,092	21,458	3,397	3,992
DIST OF COL	468,493	326,455	70,214	-	16,945	1,532	47,920	-	5,427
OHIO	457,342	204,982	170,399	4,777	41,328	-	33,009	-	2,847
NEW MEXICO	444,089	138,774	50,555	137,507	9,942	99,819	6,146	956	390
WASHINGTON	412,230	18,836	297,525	338	33,229	2,540	4,293	53,542	1,927
ALABAMA	357,221	176,435	164,500	-	12,116	-	3,642	-	528
VIRGINIA	352,685	218,182	83,401	-	16,134	1,161	6,934	25,534	1,339
MISSOURI	291,181	15,900	237,707	-	27,703	-	4,885	4,210	776
COLORADO	274,113	41,189	181,669	-	29,156	12,968	7,930	-	1,201
ILLINOIS	239,563	27,253	22,221	-	81,289	76,933	27,936	473	3,458
TENNESSEE	193,814	9,233	74,785	82,224	19,449	1,868	5,513	-	742
NEVADA	190,948	35,302	138,593	3,956	2,711	9,746	369	-	271
MICHIGAN	162,818	25,111	81,355	-	49,894	-	4,295	-	2,163
CONNECTICUT	160,027	27,919	103,593	-	25,713	-	2,148	-	654
LOUISIANA	146,488	19,010	107,902	-	15,286	-	2,344	-	1,946
MINNESOTA	109,270	7,988	67,755	-	24,866	-	6,518	958	1,185
INDIANA	91,905	14,016	51,508	-	24,666	-	1,154	-	561
WISCONSIN	87,143	9,335	30,192	-	37,840	2,578	6,513	-	685
IDAHO	75,008	4,661	-	52,092	1,821	13,443	133	2,429	429
ARIZONA	72,803	31,606	23,804	-	8,608	6,419	1,852	-	514
GEORGIA	72,265	21,943	21,635	-	22,603	339	3,843	720	1,182
N CAROLINA	63,908	12,963	5,632	-	37,148	-	6,162	1,152	851
UTAH	61,052	21,712	19,047	-	15,689	656	3,249	-	699
HAWAII	43,815	9,231	21,149	-	10,756	-	1,833	-	846
ALASKA	43,179	10,849	23,886	-	5,586	-	1,187	-	1,671
OREGON	33,848	8,338	127	-	14,898	596	6,401	1,841	1,647
IOWA	32,661	5,976	3,381	-	14,781	7,476	528	-	519
RHODE ISL	29,911	11,553	7,207	-	9,637	-	1,164	-	350
OKLAHOMA	29,483	12,164	4,538	-	8,230	-	3,837	-	714
MISSISSIPPI	28,276	16,918	1,631	-	6,121	-	2,991	-	615
NEW HAMP	27,268	4,236	15,614	-	7,133	-	35	-	250
KENTUCKY	20,413	9,237	737	-	9,191	-	631	-	617
W VIRGINIA	19,631	5,818	770	-	5,475	5,180	566	1,126	696
S CAROLINA	17,804	2,739	154	8,777	4,738	-	1,050	-	346
KANSAS	16,646	2,495	2,512	-	10,844	-	303	-	492
DELAWARE	16,299	780	13,699	-	1,593	-	131	-	96
MAINE	13,262	3,504	5,465	-	1,426	-	1,930	-	937
MONTANA	11,646	5,827	1,933	-	2,556	-	772	-	558
NEBRASKA	10,648	2,317	2,500	-	5,167	-	121	-	543
ARKANSAS	9,787	1,072	2,236	-	4,796	-	880	-	803
VERMONT	9,452	557	4,292	-	3,490	-	814	-	299
N DAKOTA	8,878	4,772	5	-	2,545	-	1,221	-	335
WYOMING	7,161	4,224	1	-	2,662	-	15	-	259
S DAKOTA	6,091	1,743	874	-	2,549	-	455	-	470
OUT AREAS	17,280	4,397	6,630	-	4,277	1,400	156	-	420
OFF ABROAD	56,826	43,344	7,154	-	455	1,600	143	4,130	-

(1) FEDERAL INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE. (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION)

NOTE- THE OBLIGATIONS OF THE TEN MAJOR R&D SUPPORTING AGENCIES INCLUDED IN THIS TABLE REPRESENT MORE THAN 98 PERCENT OF TOTAL FEDERAL R&D OBLIGATIONS IN FY 1970.

TABLE C-83A. PERCENT DISTRIBUTION OF FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT TO EACH PERFORMER, BY STATE, FISCAL YEAR 1970

STATE (IN ORDER OF TOTAL FEDERAL R&D OBLIGATIONS)	TOTAL	FEDERAL INTRAMURAL (1)	EXTRAMURAL						
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY INDUSTRIAL FIRMS	UNIVER-SITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NONPROFIT INSTI-TUTIONS	FFRDCS ADMIN BY NONPROFIT INSTI-TUTIONS	OTHER
TOTAL, ALL STATES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
CALIFORNIA	25.8	14.7	33.2	7.4	14.3	41.2	14.5	39.0	12.3
NEW YORK	8.2	2.1	10.1	12.1	11.6	7.9	16.5	1.4	15.5
MARYLAND	7.1	17.7	3.8	-	2.8	7.0	1.4	2.2	4.7
FLORIDA	5.5	8.6	5.9	-	2.2	-	.6	-	2.2
MASS	5.1	3.1	4.4	-	10.5	8.3	10.1	15.9	4.2
NEW JERSEY	5.0	4.1	6.9	-	1.7	1.5	1.5	-	3.0
TEXAS	4.3	4.6	5.2	-	4.1	-	1.4	.9	4.7
PENN	3.6	2.8	3.5	13.2	4.7	1.2	4.9	1.4	4.5
DIST OF COL	3.1	8.8	.9	-	1.2	.2	11.0	-	6.1
OHIO	3.1	5.5	2.2	1.1	2.9	-	7.6	-	3.2
NEW MEXICO	3.0	3.7	.6	31.9	.7	13.3	1.4	.4	.4
WASHINGTON	2.8	.5	3.8	.1	2.3	.3	1.0	21.6	2.2
ALABAMA	2.4	4.7	2.1	-	.8	-	.8	-	.6
VIRGINIA	2.4	5.9	1.1	-	1.1	.2	1.6	10.3	1.5
MISSOURI	1.9	.4	3.0	-	1.9	-	1.1	1.7	.9
COLORADO	1.8	1.1	2.3	-	2.0	1.7	1.8	-	1.4
ILLINOIS	1.6	.7	.3	-	5.7	10.3	6.4	.2	3.9
TENNESSEE	1.3	.2	1.0	19.1	1.4	.2	1.3	-	.8
NEVADA	1.3	.9	1.8	.9	.2	1.3	.1	-	.3
MICHIGAN	1.1	.7	1.0	-	3.5	-	1.0	-	2.4
CONNECTICUT	1.1	.7	1.3	-	1.8	-	.5	-	.7
LOUISIANA	1.0	.5	1.4	-	1.1	-	.5	-	2.2
MINNESOTA	.7	.2	.9	-	1.7	-	1.5	.4	1.3
INDIANA	.6	.4	.7	-	1.7	-	.3	-	.6
WISCONSIN	.6	.3	.4	-	2.6	.3	1.5	-	.8
IDAHO	.5	.1	-	12.1	.1	1.8	*	1.0	.5
ARIZONA	.5	.8	.3	-	.6	.9	.4	-	.6
GEORGIA	.5	.6	.3	-	1.6	*	.9	.3	1.3
N CAROLINA	.4	.3	.1	-	2.6	-	1.4	.5	1.0
UTAH	.4	.6	.2	-	1.1	.1	.7	-	.8
HAWAII	.3	.2	.3	-	.7	-	.4	-	1.0
ALASKA	.3	.3	.3	-	.4	-	.3	-	1.9
OREGON	.2	.2	*	-	1.0	.1	1.5	.7	1.9
IOWA	.2	.2	*	-	1.0	1.0	.1	-	.6
RHODE ISL	.2	.3	.1	-	.7	-	.3	-	.4
OKLAHOMA	.2	.3	.1	-	.6	-	.9	-	.8
MISSISSIPPI	.2	.5	*	-	.4	-	.7	-	.7
NEW HAMP	.2	.1	.2	-	.5	-	*	-	.3
KENTUCKY	.1	.2	*	-	.6	-	.1	-	.7
W VIRGINIA	.1	.2	*	-	.4	.7	.1	.5	.8
S CAROLINA	.1	.1	*	2.0	.3	-	.2	-	.4
KANSAS	.1	.1	*	-	.8	-	.1	-	.6
DELAWARE	.1	*	.2	-	.1	-	*	-	.1
MAINE	.1	.1	.1	-	.1	-	.4	-	1.1
MONTANA	.1	.2	*	-	.2	-	.2	-	.6
NEBRASKA	.1	.1	*	-	.4	-	*	-	.6
ARKANSAS	.1	*	*	-	.3	-	.2	-	.9
VERMONT	.1	*	.1	-	.2	-	.2	-	.3
N DAKOTA	.1	.1	*	-	.2	-	.3	-	.4
WYOMING	*	.1	*	-	.2	-	*	-	.3
S DAKOTA	*	*	*	-	.2	-	.1	-	.5
OUT AREAS	.1	.1	.1	-	.3	.2	*	-	.5
OFF ABROAD	.4	1.2	.1	-	*	.2	*	1.7	-

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(1) FEDERAL INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE. (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION)

TABLE C-83B. PERCENT DISTRIBUTION OF FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT

TO EACH STATE, BY PERFORMER, FISCAL YEAR 1970

STATE (IN ORDER OF TOTAL FEDERAL R&D OBLIGATIONS)	TOTAL	FEDERAL INTRAMURAL (1)	EXTRAMURAL						
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NONPROFIT INSTITUTIONS	FFRDCS ADMIN BY NONPROFIT INSTITUTIONS	OTHER
TOTAL, ALL STATES	100.0	24.9	52.5	2.9	9.6	5.0	2.9	1.7	.6
CALIFORNIA	100.0	14.1	67.3	.8	5.3	8.0	1.6	2.5	.3
NEW YORK	100.0	6.3	64.0	4.2	13.5	4.8	5.8	.3	1.1
MARYLAND	100.0	62.0	27.8	-	3.8	4.9	.6	.5	.4
FLORIDA	100.0	39.0	56.7	-	3.8	-	.3	-	.2
MASS	100.0	15.3	45.3	-	19.8	8.1	5.8	5.2	.5
NEW JERSEY	100.0	20.6	73.4	-	3.2	1.6	.9	-	.4
TEXAS	100.0	26.2	62.8	-	9.1	-	.9	.3	.6
PENN	100.0	19.1	50.6	10.6	12.7	1.7	4.0	.6	.7
DIST OF COL	100.0	69.7	15.0	-	3.6	.3	10.2	-	1.2
OHIO	100.0	44.8	37.3	1.0	9.0	-	7.2	-	.6
NEW MEXICO	100.0	31.2	11.4	31.0	2.2	22.5	1.4	.2	.1
WASHINGTON	100.0	4.6	72.2	.1	8.1	.6	1.0	13.0	.5
ALABAMA	100.0	49.4	46.0	-	3.4	-	1.0	-	.1
VIRGINIA	100.0	61.9	23.6	-	4.6	.3	2.0	7.2	.4
MISSOURI	100.0	5.5	81.6	-	9.5	-	1.7	1.4	.3
COLORADO	100.0	15.0	66.3	-	10.6	4.7	2.9	-	.4
ILLINOIS	100.0	11.4	9.3	-	33.9	32.1	11.7	.2	1.4
TENNESSEE	100.0	4.8	38.6	42.4	10.0	1.0	2.8	-	.4
NEVADA	100.0	18.5	72.6	2.1	1.4	5.1	.2	-	.1
MICHIGAN	100.0	15.4	50.0	-	30.6	-	2.6	-	1.3
CONNECTICUT	100.0	17.4	64.7	-	16.1	-	1.3	-	.4
LOUISIANA	100.0	13.0	73.7	-	10.4	-	1.6	-	1.3
MINNESOTA	100.0	7.3	62.0	-	22.8	-	6.0	.9	1.1
INDIANA	100.0	15.3	56.0	-	26.8	-	1.3	-	.6
WISCONSIN	100.0	10.7	34.6	-	43.4	3.0	7.5	-	.8
IDAHO	100.0	6.2	-	69.4	2.4	17.9	.2	3.2	.6
ARIZONA	100.0	43.4	32.7	-	11.8	8.8	2.5	-	.7
GEORGIA	100.0	30.4	29.9	-	31.3	.5	5.3	1.0	1.6
N CAROLINA	100.0	20.3	8.8	-	58.1	-	9.6	1.8	1.3
UTAH	100.0	35.6	31.2	-	25.7	1.1	5.3	-	1.1
HAWAII	100.0	21.1	48.3	-	24.5	-	4.2	-	1.9
ALASKA	100.0	25.1	55.3	-	12.9	-	2.7	-	3.9
OREGON	100.0	24.6	.4	-	44.0	1.8	18.9	5.4	4.9
IOWA	100.0	18.3	10.4	-	45.3	22.9	1.6	-	1.6
RHODE ISL	100.0	38.6	24.1	-	32.2	-	3.9	-	1.2
OKLAHOMA	100.0	41.3	15.4	-	27.9	-	13.0	-	2.4
MISSISSIPPI	100.0	59.8	5.8	-	21.6	-	10.6	-	2.2
NEW HAMP	100.0	15.5	57.3	-	26.2	-	.1	-	.9
KENTUCKY	100.0	45.3	3.6	-	45.0	-	3.1	-	3.0
W VIRGINIA	100.0	29.6	3.9	-	27.9	26.4	2.9	5.7	3.5
S CAROLINA	100.0	15.4	.9	49.3	26.6	-	5.9	-	1.9
KANSAS	100.0	15.0	15.1	-	65.1	-	1.8	-	3.0
DELAWARE	100.0	4.8	84.0	-	9.8	-	.8	-	.6
MAINE	100.0	26.4	41.2	-	10.8	-	14.6	-	7.1
MONTANA	100.0	50.0	16.6	-	21.9	-	6.6	-	4.8
NEBRASKA	100.0	21.8	23.5	-	48.5	-	1.1	-	5.1
ARKANSAS	100.0	11.0	22.8	-	49.0	-	9.0	-	8.2
VERMONT	100.0	5.9	45.4	-	36.9	-	8.6	-	3.2
N DAKOTA	100.0	53.8	.1	-	28.7	-	13.8	-	3.8
WYOMING	100.0	59.0	*	-	37.2	-	.2	-	3.6
S DAKOTA	100.0	28.6	14.3	-	41.8	-	7.5	-	7.7
OUT AREAS	100.0	25.4	38.4	-	24.8	8.1	.9	-	2.4
OFF ABROAD	100.0	76.3	12.6	-	.8	2.8	.3	7.3	-

(1) FEDERAL INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE. (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION)

TABLE C-84. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY STATE AND AGENCY

FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

STATE (IN ORDER OF TOTAL FEDERAL R&D OBLIGATIONS)	TOTAL	DEPT. OF AGRICULTURE	DEPT. OF COMMERCE	DEPT. OF DEFENSE	DEPT. OF HEALTH, EDUCATION & WELFARE	DEPT. OF INTERIOR	DEPT. OF TRANSPORTATION	ATOMIC ENERGY COMMISSION	NATIONAL AERONAUTICS & SPACE ADMIN	NATIONAL SCIENCE FOUNDATION	OFFICE OF ECONOMIC OPPORTUNITY
TOT, ALL ST	14,980,751	275,663	119,894	7,350,171	1,205,336	157,902	317,322	1,345,308	3,798,558	287,214	123,383
CALIFORNIA	3,871,053	18,296	5,411	2,220,160	135,229	14,287	18,685	284,123	1,129,095	35,921	9,846
NEW YORK	1,235,594	8,159	8,108	583,129	141,683	3,640	12,764	121,742	309,123	29,263	17,983
MARYLAND	1,063,359	41,927	36,838	481,315	240,050	11,838	7,163	7,907	225,796	6,799	3,726
FLORIDA	824,785	7,103	4,776	382,195	16,408	1,876	881	1,951	399,251	8,206	2,138
MASS	760,920	1,111	4,268	512,464	83,519	3,809	9,425	20,931	99,562	19,785	6,046
NEW JERSEY	742,526	1,287	248	605,459	15,651	3,437	34,794	16,810	55,890	5,870	3,080
TEXAS	649,122	9,579	2,881	200,799	35,056	3,823	4,346	3,929	380,309	6,389	2,011
PENN	538,761	9,054	349	295,203	62,087	11,213	3,068	94,486	45,418	12,515	5,368
DIST OF COL	468,493	17,203	18,027	244,140	41,097	10,076	20,279	2,520	73,909	20,882	20,360
OHIO	457,342	4,383	288	249,945	31,887	1,800	44,388	15,303	99,180	7,302	2,866
NEW MEXICO	444,089	1,607	43	196,658	2,867	2,815	410	224,957	12,076	1,045	1,611
WASHINGTON	412,230	5,586	5,523	183,059	21,005	3,855	118,429	60,235	6,075	6,758	1,705
ALABAMA	357,221	3,210	75	81,519	10,660	1,453	1,292	78	258,503	331	100
VIRGINIA	352,685	3,778	2,180	202,158	11,789	4,093	10,957	2,466	111,992	1,888	1,384
MISSOURI	291,181	3,544	90	145,198	25,538	3,446	369	530	107,642	3,015	1,809
COLORADO	274,113	4,389	12,508	75,331	17,082	13,476	452	2,228	128,774	19,570	303
ILLINOIS	239,563	10,257	196	61,111	45,633	2,231	1,945	86,400	11,304	14,804	5,682
TENNESSEE	193,814	2,485	309	62,288	13,972	1,972	298	96,882	12,256	1,924	1,428
NEVADA	190,948	726	24	28,938	454	4,371	38	152,028	3,974	395	-
MICHIGAN	162,818	3,591	2,747	81,006	25,689	2,212	3,255	5,447	28,245	9,543	1,083
CONNECTICUT	160,027	1,380	787	101,945	15,662	392	1,240	6,309	27,150	5,063	99
LOUISIANA	146,488	11,556	484	2,750	10,999	625	979	277	114,454	3,204	1,160
MINNESOTA	109,270	5,037	208	39,900	22,093	3,692	566	3,492	29,989	2,808	1,485
INDIANA	91,905	2,914	52	59,664	10,865	592	1,641	3,274	6,855	5,842	206
WISCONSIN	87,143	8,772	502	12,938	21,607	1,662	241	4,553	21,824	5,500	9,544
IDAHO	75,008	3,534	-	241	298	1,287	21	68,144	900	555	28
ARIZONA	72,803	5,131	6	42,040	4,727	2,711	513	447	8,341	8,065	822
GEORGIA	72,265	10,972	595	25,266	21,852	1,065	823	1,038	4,415	4,224	2,015
N CAROLINA	63,908	5,509	1,271	11,653	30,019	2,842	723	1,792	2,433	5,961	1,705
UTAH	61,052	2,821	17	38,858	8,738	3,674	201	1,195	1,442	2,702	1,404
HAWAII	43,815	1,324	1,709	22,198	4,037	905	83	3,240	5,387	3,852	1,080
ALASKA	43,179	1,524	3,081	4,418	1,467	4,641	125	21,603	3,085	1,980	1,255
OREGON	33,848	5,026	804	3,025	15,464	4,533	216	1,266	607	351	2,556
IOWA	32,661	7,155	45	2,824	8,697	488	233	7,562	4,229	1,428	-
RHODE ISL	29,911	466	309	19,843	4,121	427	176	694	450	3,213	212
OKLAHOMA	29,483	2,740	869	5,069	5,388	2,064	8,847	130	1,265	704	2,407
MISSISSIPPI	28,276	8,501	1,189	7,529	2,796	459	693	73	3,905	393	2,738
NEW HAMP	27,268	1,129	19	14,359	3,074	345	2,799	344	3,736	1,463	-
KENTUCKY	20,413	3,448	150	5,991	5,798	1,225	397	618	842	1,062	882
W VIRGINIA	19,631	2.528	36	845	3,885	4.226	417	25	356	6,337	976
S CAROLINA	17,804	3,574	36	542	1,844	561	264	8,875	251	756	1,101
KANSAS	16,646	2,087	19	2,397	7,227	697	305	667	1,205	1,872	170
DELAWARE	16,299	536	64	919	207	238	71	30	13,872	362	-
MAINE	13,262	1,204	1,319	1,972	1,935	614	1,040	83	4,648	262	185
MONTANA	11,646	3,577	206	2,018	2,626	1,768	125	12	582	604	128
NEBRASKA	10,648	3,182	19	2,466	3,187	407	307	331	115	544	90
ARKANSAS	9,787	1,840	182	433	3,261	782	286	1,998	63	383	559
VERMONT	9,452	1,059	21	4,455	2,193	188	267	82	138	392	657
N DAKOTA	8,878	4,105	147	465	1,111	1,642	109	66	-	133	1,100
WYOMING	7,161	972	27	21	208	4,690	125	72	123	923	-
S DAKOTA	6,091	1,984	181	451	376	1,684	251	38	59	817	250
OUT AREAS	17,280	2,474	338	7,873	1,917	1,053	-	1,895	174	1,516	40
OFF ABROAD	56,826	327	313	12,728	301	-	-	4,130	37,289	1,738	-

NOTE- THE OBLIGATIONS OF THE TEN MAJOR R&D SUPPORTING AGENCIES INCLUDED IN THIS TABLE REPRESENT MORE THAN 98 PERCENT OF TOTAL FEDERAL R&D OBLIGATIONS IN FY 1970.

TABLE C-84A. PERCENT DISTRIBUTION OF FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT

OF EACH AGENCY, BY STATE, FISCAL YEAR 1970

STATE (IN ORDER OF TOTAL FEDERAL R&D OBLIGATIONS)	TOTAL	DEPT. OF AGRICULTURE	DEPT. OF COMMERCE	DEPT. OF DEFENSE	DEPT. OF HEALTH, EDUCATION & WELFARE	DEPT. OF INTERIOR	DEPT. OF TRANSPORTATION	ATOMIC ENERGY COMMISSION	NATIONAL AERONAUTICS & SPACE ADMIN	NATIONAL SCIENCE FOUNDATION	OFFICE OF ECONOMIC OPPORTUNITY
TOT, ALL ST	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
CALIFORNIA	25.8	6.6	4.5	30.2	11.2	9.0	5.9	21.1	29.7	12.5	8.0
NEW YORK	8.2	3.0	6.8	7.9	11.8	2.3	4.0	9.0	8.1	10.2	14.6
MARYLAND	7.1	15.2	30.7	6.5	19.9	7.5	2.3	.6	5.9	2.4	3.0
FLORIDA	5.5	2.6	4.0	5.2	1.4	1.2	.3	.1	10.5	2.9	1.7
HASS	5.1	.4	3.6	7.0	6.9	2.4	3.0	1.6	2.6	6.9	4.9
NEW JERSEY	5.0	.5	.2	8.2	1.3	2.2	11.0	1.2	1.5	2.0	2.5
TEXAS	4.3	3.5	2.4	2.7	2.9	2.4	1.4	.3	10.0	2.2	1.6
PENN	3.6	3.3	.3	4.0	5.2	7.1	1.0	7.0	1.2	4.4	4.4
DIST OF COL	3.1	6.2	15.0	3.3	3.4	6.4	6.4	.2	1.9	7.3	16.5
OHIO	3.1	1.6	.2	3.4	2.6	1.1	14.0	1.1	2.6	2.5	2.3
NEW MEXICO	3.0	.6	*	2.7	.2	1.8	.1	16.7	.3	.4	1.3
WASHINGTON	2.8	2.0	4.6	2.5	1.7	2.4	37.3	4.5	.2	2.4	1.4
ALABAMA	2.4	1.2	.1	1.1	.9	.9	.4	*	6.8	.1	.1
VIRGINIA	2.4	1.4	1.8	2.8	1.0	2.6	3.5	.2	2.9	.7	1.1
MISSOURI	1.9	1.3	.1	2.0	2.1	2.2	.1	*	2.8	1.0	1.5
COLORADO	1.8	1.6	10.4	1.0	1.4	8.5	.1	.2	3.4	6.8	.2
ILLINOIS	1.6	3.7	.2	.8	3.8	1.4	.6	6.4	.3	5.2	4.6
TENNESSEE	1.3	.9	.3	.8	1.2	1.2	.1	7.2	.3	.7	1.2
NEVADA	1.3	.3	*	.4	*	2.8	*	11.3	.1	.1	-
MICHIGAN	1.1	1.3	2.3	1.1	2.1	1.4	1.0	.4	.7	3.3	.9
CONNECTICUT	1.1	.5	.7	1.4	1.3	.2	.4	.5	.7	1.8	.1
LOUISIANA	1.0	4.2	.4	*	.9	.4	.3	*	3.0	1.1	.9
MINNESOTA	.7	1.8	.2	.5	1.8	2.3	.2	.3	.8	1.0	1.2
INDIANA	.6	1.1	*	.8	.9	.4	.5	.2	.2	2.0	.2
WISCONSIN	.6	3.2	.4	.2	1.8	1.1	.1	.3	.6	1.9	7.7
IDAHO	.5	1.3	-	*	*	.8	*	5.1	*	.2	*
ARIZONA	.5	1.9	*	.6	.4	1.7	.2	*	.2	2.8	.7
GEORGIA	.5	4.0	.5	.3	1.8	.7	.3	.1	.1	1.5	1.6
N CAROLINA	.4	2.0	1.1	.2	2.5	1.8	.2	.1	.1	2.1	1.4
UTAH	.4	1.0	*	.5	.7	2.3	.1	.1	*	.9	1.1
HAWAII	.3	.5	1.4	.3	.3	.6	*	.2	.1	1.3	.9
ALASKA	.3	.6	2.6	.1	.1	2.9	*	1.6	.1	.7	1.0
OREGON	.2	1.8	.7	*	1.3	2.9	.1	.1	*	.1	2.1
IOWA	.2	2.6	*	*	.7	.3	.1	.6	.1	.5	-
RHODE ISL	.2	.2	.3	.3	.3	.3	.1	.1	*	1.1	.2
OKLAHOMA	.2	1.0	.7	.1	.4	1.3	2.8	*	*	.2	2.0
MISSISSIPPI	.2	3.1	1.0	.1	.2	.3	.2	*	.1	.1	2.2
NEW HAMP	.2	.4	*	.2	.3	.2	.9	*	.1	.5	-
KENTUCKY	.1	1.3	.1	.1	.5	.8	.1	*	*	.4	.7
W VIRGINIA	.1	.9	*	*	.3	2.7	.1	*	*	2.2	.8
S CAROLINA	.1	1.3	*	*	.2	.4	.1	.7	*	.3	.9
KANSAS	.1	.8	*	*	.6	.4	.1	*	*	.7	.1
DELAWARE	.1	.2	.1	*	*	.2	*	*	.4	.1	-
MAINE	.1	.4	1.1	*	.2	.4	.3	*	.1	.1	.1
MONTANA	.1	1.3	.2	*	.2	1.1	*	*	*	.2	.1
NEBRASKA	.1	1.2	*	*	.3	.3	.1	*	*	.2	.1
ARKANSAS	.1	.7	.2	*	.3	.5	.1	.1	*	.1	.5
VERMONT	.1	.4	*	.1	.2	.1	.1	*	*	.1	.5
N DAKOTA	.1	1.5	.1	*	.1	1.0	*	*	-	*	.9
WYOMING	*	.4	*	*	*	3.0	*	*	*	.3	-
S DAKOTA	*	.7	.2	*	*	1.1	.1	*	*	.3	.2
OUT AREAS	.1	.9	.3	.1	.2	.7	-	.1	*	.5	*
OFF ABROAD	.4	.1	.3	.2	*	-	-	.3	1.0	.6	-

TABLE C-84B. PERCENT DISTRIBUTION OF FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT

TO EACH STATE, BY AGENCY, FISCAL YEAR 1970

STATE (IN ORDER OF TOTAL FEDERAL R&D OBLIGATIONS)	TOTAL	DEPT. OF AGRICULTURE	DEPT. OF COMMERCE	DEPT. OF DEFENSE	DEPT. OF HEALTH, EDUCATION & WELFARE	DEPT. OF INTERIOR	DEPT. OF TRANSPORTATION	ATOMIC ENERGY COMMISSION	NATIONAL AERONAUTICS & SPACE ADMIN	NATIONAL SCIENCE FOUNDATION	OFFICE OF ECONOMIC OPPORTUNITY
TOT, ALL ST	100.0	1.8	.8	49.1	8.0	1.1	2.1	9.0	25.4	1.9	.8
CALIFORNIA	100.0	.5	.1	57.4	3.5	.4	.5	7.3	29.2	.9	3.2
NEW YORK	100.0	.7	.7	47.2	11.5	.3	1.0	9.9	25.0	2.4	10.0
MARYLAND	100.0	3.9	3.5	45.3	22.6	1.1	.7	.7	21.2	.6	11.6
FLORIDA	100.0	.9	.6	46.3	2.0	.2	.1	.2	48.4	1.0	15.0
MASS	100.0	.1	.6	67.3	11.0	.5	1.2	2.8	13.1	2.6	16.2
NEW JERSEY	100.0	.2	*	81.5	2.1	.5	4.7	2.3	7.5	.8	16.6
TEXAS	100.0	1.5	.4	30.9	5.4	.6	.7	.6	58.6	1.0	19.0
PENN	100.0	1.7	.1	54.8	11.5	2.1	.6	17.5	8.4	2.3	22.9
DIST OF COL	100.0	3.7	3.8	52.1	8.8	2.2	4.3	.5	15.8	4.5	26.3
OHIO	100.0	1.0	.1	54.7	7.0	.4	9.7	3.3	21.7	1.6	27.0
NEW MEXICO	100.0	.4	*	44.3	.6	.6	.1	50.7	2.7	.2	27.8
WASHINGTON	100.0	1.4	1.3	44.4	5.1	.9	28.7	14.6	1.5	1.6	29.9
ALABAMA	100.0	.9	*	22.8	3.0	.4	.4	*	72.4	.1	34.5
VIRGINIA	100.0	1.1	.6	57.3	3.3	1.2	3.1	.7	31.8	.5	35.0
MISSOURI	100.0	1.2	*	49.9	8.8	1.2	.1	.2	37.0	1.0	42.4
COLORADO	100.0	1.6	4.6	27.5	6.2	4.9	.2	.8	47.0	7.1	45.0
ILLINOIS	100.0	4.3	.1	25.5	19.0	.9	.8	36.1	4.7	6.2	51.5
TENNESSEE	100.0	1.3	.2	32.1	7.2	1.0	.2	50.0	6.3	1.0	63.7
NEVADA	100.0	.4	*	15.2	.2	2.3	*	79.6	2.1	.2	64.6
MICHIGAN	100.0	2.2	1.7	49.8	15.8	1.4	2.0	3.3	17.3	5.9	75.8
CONNECTICUT	100.0	.9	.5	63.7	9.8	.2	.8	3.9	17.0	3.2	77.1
LOUISIANA	100.0	7.9	.3	1.9	7.5	.4	.7	.2	78.1	2.2	84.2
MINNESOTA	100.0	4.6	.2	36.5	20.2	3.4	.5	3.2	27.4	2.6	112.9
INDIANA	100.0	3.2	.1	64.9	11.8	.6	1.8	3.6	7.5	6.4	134.3
WISCONSIN	100.0	10.1	.6	14.8	24.8	1.9	.3	5.2	25.0	6.3	141.6
IDAHO	100.0	4.7	-	.3	.4	1.7	*	90.8	1.2	.7	164.5
ARIZONA	100.0	7.0	*	57.7	6.5	3.7	.7	.6	11.5	11.1	169.5
GEORGIA	100.0	15.2	.8	35.0	30.2	1.5	1.1	1.4	6.1	5.8	170.7
N CAROLINA	100.0	8.6	2.0	18.2	47.0	4.4	1.1	2.8	3.8	9.3	193.1
UTAH	100.0	4.6	*	63.6	14.3	6.0	.3	2.0	2.4	4.4	202.1
HAWAII	100.0	3.0	3.9	50.7	9.2	2.1	.2	7.4	12.3	8.8	281.6
ALASKA	100.0	3.5	7.1	10.2	3.4	10.7	.3	50.0	7.1	4.6	285.7
OREGON	100.0	14.8	2.4	8.9	45.7	13.4	.6	3.7	1.8	1.0	364.5
IOWA	100.0	21.9	.1	8.6	26.6	1.5	.7	23.2	12.9	4.4	377.8
RHODE ISL	100.0	1.6	1.0	66.3	13.8	1.4	.6	2.3	1.5	10.7	412.5
OKLAHOMA	100.0	9.3	2.9	17.2	18.3	7.0	30.0	.4	4.3	2.4	418.5
MISSISSIPPI	100.0	30.1	4.2	26.6	9.9	1.6	2.5	.3	13.8	1.4	436.4
NEW HAMP	100.0	4.1	.1	52.7	11.3	1.3	10.3	1.3	13.7	5.4	452.5
KENTUCKY	100.0	16.9	.7	29.3	28.4	6.0	1.9	3.0	4.1	5.2	604.4
W VIRGINIA	100.0	12.9	.2	4.3	19.8	21.5	2.1	.1	1.8	32.3	628.5
S CAROLINA	100.0	20.1	.2	3.0	10.4	3.2	1.5	49.8	1.4	4.2	693.0
KANSAS	100.0	12.5	.1	14.4	43.4	4.2	1.8	4.0	7.2	11.2	741.2
DELAWARE	100.0	3.3	.4	5.6	1.3	1.5	.4	.2	85.1	2.2	757.0
MAINE	100.0	9.1	9.9	14.9	14.6	4.6	7.8	.6	35.0	2.0	930.3
MONTANA	100.0	30.7	1.8	17.3	22.5	15.2	1.1	.1	5.0	5.2	59.4
NEBRASKA	100.0	29.9	.2	23.2	29.9	3.8	2.9	3.1	1.1	5.1	158.7
ARKANSAS	100.0	18.8	1.9	4.4	33.3	8.0	2.9	20.4	.6	3.9	260.7
VERMONT	100.0	11.2	.2	47.1	23.2	2.0	2.8	.9	1.5	4.1	305.4
N DAKOTA	100.0	46.2	1.7	5.2	12.5	18.5	1.2	.7	-	1.5	389.8
WYOMING	100.0	13.6	.4	.3	2.9	65.5	1.7	1.0	1.7	12.9	723.0
S DAKOTA	100.0	32.6	3.0	7.4	6.2	27.6	4.1	.6	1.0	13.4	25.7
OUT AREAS	100.0	14.3	2.0	45.6	11.1	6.1	-	11.0	1.0	8.8	714.0
OFF ABROAD	100.0	.6	.6	22.4	.5	-	-	7.3	65.6	3.1	217.1

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION, STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

GEOGRAPHIC DIVISION, STATE, AND AGENCY	TOTAL	FEDERAL INTRAMURAL (1)	EXTRAMURAL						
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN BY NON-PROFIT INSTITUTIONS	OTHER
TOTAL, ALL STATES	14,980,751	3,729,333	7,862,204	430,403	1,438,415	748,391	435,596	247,771	88,638
DEPARTMENT OF AGRICULTURE	275,663	208,355	1,304	-	64,796	-	1,196	-	12
DEPARTMENT OF COMMERCE	119,894	88,063	17,713	-	4,487	-	1,169	3	8,459
DEPARTMENT OF DEFENSE	7,350,171	1,995,579	4,737,327	15,088	213,519	139,906	93,520	154,763	469
DEPT. OF HEALTH, EDUC, & WELFARE	1,205,336	246,583	43,653	-	646,606	8,031	184,371	27,735	48,357
DEPARTMENT OF THE INTERIOR	157,902	100,401	26,338	1,372	18,521	-	2,540	97	8,633
DEPARTMENT OF TRANSPORTATION	317,322	64,240	206,364	-	10,934	-	10,255	3,154	22,375
ATOMIC ENERGY COMMISSION	1,345,308	17,466	300,022	409,649	100,326	448,001	9,719	59,881	244
NATIONAL AERONAUTICS & SPACE ADMIN	3,798,558	988,048	2,516,247	4,294	131,231	126,785	30,974	979	-
NATIONAL SCIENCE FOUNDATION	287,214	13,900	2,805	-	227,960	25,668	15,945	847	89
OFFICE OF ECONOMIC OPPORTUNITY	123,383	6,698	10,431	-	20,035	-	85,907	312	-
NEW ENGLAND	1,000,840	164,395	480,985	-	198,048	61,842	49,877	39,486	6,207
DEPARTMENT OF AGRICULTURE	6,349	2,219	150	-	3,575	-	405	-	-
DEPARTMENT OF COMMERCE	6,723	2,981	2,460	-	727	-	74	-	481
DEPARTMENT OF DEFENSE	655,038	131,654	380,002	-	48,400	58,056	1,098	35,828	-
DEPT. OF HEALTH, EDUC, & WELFARE	110,504	368	7,390	-	62,603	98	35,704	950	3,391
DEPARTMENT OF THE INTERIOR	5,775	1,747	1,978	-	1,387	-	77	97	489
DEPARTMENT OF TRANSPORTATION	14,947	2,742	7,064	-	1,009	-	60	2,248	1,824
ATOMIC ENERGY COMMISSION	28,443	325	8,804	-	14,936	3,476	902	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	135,684	22,218	71,399	-	36,430	212	5,425	-	-
NATIONAL SCIENCE FOUNDATION	30,178	141	-	-	27,822	-	1,830	363	22
OFFICE OF ECONOMIC OPPORTUNITY	7,199	-	1,738	-	1,159	-	4,302	-	-
CONNECTICUT	160,027	27,919	103,593	-	25,713	-	2,148	-	654
DEPARTMENT OF AGRICULTURE	1,380	683	-	-	397	-	300	-	-
DEPARTMENT OF COMMERCE	787	356	378	-	15	-	-	-	38
DEPARTMENT OF DEFENSE	101,945	25,144	74,987	-	1,716	-	98	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	15,662	23	98	-	13,950	-	1,103	-	488
DEPARTMENT OF THE INTERIOR	392	181	83	-	100	-	4	-	24
DEPARTMENT OF TRANSPORTATION	1,240	192	884	-	60	-	-	-	104
ATOMIC ENERGY COMMISSION	6,309	80	2,770	-	3,443	-	16	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	27,150	1,260	24,393	-	1,364	-	133	-	-
NATIONAL SCIENCE FOUNDATION	5,063	-	-	-	4,668	-	395	-	-
OFFICE OF ECONOMIC OPPORTUNITY	99	-	-	-	-	-	99	-	-
MAINE	13,262	3,504	5,465	-	1,426	-	1,930	-	937
DEPARTMENT OF AGRICULTURE	1,204	397	-	-	807	-	-	-	-
DEPARTMENT OF COMMERCE	1,319	560	578	-	9	-	-	-	172
DEPARTMENT OF DEFENSE	1,972	1,790	155	-	27	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	1,935	-	17	-	166	-	1,623	-	129
DEPARTMENT OF THE INTERIOR	614	231	-	-	154	-	10	-	219
DEPARTMENT OF TRANSPORTATION	1,040	310	313	-	-	-	-	-	417
ATOMIC ENERGY COMMISSION	83	-	-	-	-	-	83	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	4,648	216	4,402	-	30	-	-	-	-
NATIONAL SCIENCE FOUNDATION	262	-	-	-	233	-	29	-	-
OFFICE OF ECONOMIC OPPORTUNITY	185	-	-	-	-	-	185	-	-
MASS	760,920	116,626	344,814	-	150,649	61,842	43,786	39,486	3,717
DEPARTMENT OF AGRICULTURE	1,111	60	150	-	796	-	105	-	-
DEPARTMENT OF COMMERCE	4,268	2,065	1,431	-	509	-	74	-	189
DEPARTMENT OF DEFENSE	512,464	90,261	283,351	-	43,968	58,056	1,000	35,828	-
DEPT. OF HEALTH, EDUC, & WELFARE	83,519	271	7,105	-	40,603	98	32,028	950	2,464
DEPARTMENT OF THE INTERIOR	3,809	998	1,895	-	683	-	63	97	73
DEPARTMENT OF TRANSPORTATION	9,425	2,163	3,136	-	849	-	60	2,248	969
ATOMIC ENERGY COMMISSION	20,931	226	5,738	-	10,688	3,476	803	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	99,562	20,527	40,270	-	33,262	212	5,291	-	-
NATIONAL SCIENCE FOUNDATION	19,785	55	-	-	18,150	-	1,195	363	22

NEW ENGLAND	1,000,840	164,395	480,985	-	198,048	61,842	49,877	39,486	6,207
DEPARTMENT OF AGRICULTURE	6,349	2,219	150	-	3,575	-	405	-	-
DEPARTMENT OF COMMERCE	6,723	2,981	2,460	-	727	-	74	-	481
DEPARTMENT OF DEFENSE	655,038	131,654	380,002	-	48,400	58,056	1,098	35,828	-
DEPT. OF HEALTH, EDUC, & WELFARE	110,504	368	7,390	-	62,603	98	35,704	950	3,391
DEPARTMENT OF THE INTERIOR	5,775	1,747	1,978	-	1,387	-	77	97	489
DEPARTMENT OF TRANSPORTATION	14,947	2,742	7,064	-	1,009	-	60	2,248	1,824
ATOMIC ENERGY COMMISSION	28,443	325	8,804	-	14,936	3,476	902	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	135,684	22,218	71,399	-	36,430	212	5,425	-	-
NATIONAL SCIENCE FOUNDATION	30,178	141	-	-	27,822	-	1,830	363	22
OFFICE OF ECONOMIC OPPORTUNITY	7,199	-	1,738	-	1,159	-	4,302	-	-
CONNECTICUT	160,027	27,919	103,593	-	25,713	-	2,148	-	654
DEPARTMENT OF AGRICULTURE	1,380	683	-	-	397	-	300	-	-
DEPARTMENT OF COMMERCE	787	356	378	-	15	-	-	-	38
DEPARTMENT OF DEFENSE	101,945	25,144	74,987	-	1,716	-	98	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	15,662	23	98	-	13,950	-	1,103	-	488
DEPARTMENT OF THE INTERIOR	392	181	83	-	100	-	4	-	24
DEPARTMENT OF TRANSPORTATION	1,240	192	884	-	60	-	-	-	104
ATOMIC ENERGY COMMISSION	6,309	80	2,770	-	3,443	-	16	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	27,150	1,260	24,393	-	1,364	-	133	-	-
NATIONAL SCIENCE FOUNDATION	5,063	-	-	-	4,668	-	395	-	-
OFFICE OF ECONOMIC OPPORTUNITY	99	-	-	-	-	-	99	-	-
MAINE	13,262	3,504	5,465	-	1,426	-	1,930	-	937
DEPARTMENT OF AGRICULTURE	1,204	397	-	-	807	-	-	-	-
DEPARTMENT OF COMMERCE	1,319	560	578	-	9	-	-	-	172
DEPARTMENT OF DEFENSE	1,972	1,790	155	-	27	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	1,935	-	17	-	166	-	1,623	-	129
DEPARTMENT OF THE INTERIOR	614	231	-	-	154	-	10	-	219
DEPARTMENT OF TRANSPORTATION	1,040	310	313	-	-	-	-	-	417
ATOMIC ENERGY COMMISSION	83	-	-	-	-	-	83	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	4,648	216	4,402	-	30	-	-	-	-
NATIONAL SCIENCE FOUNDATION	262	-	-	-	233	-	29	-	-
OFFICE OF ECONOMIC OPPORTUNITY	185	-	-	-	-	-	185	-	-
MASS	760,920	116,626	344,814	-	150,649	61,842	43,786	39,486	3,717
DEPARTMENT OF AGRICULTURE	1,111	60	150	-	796	-	105	-	-
DEPARTMENT OF COMMERCE	4,268	2,065	1,431	-	509	-	74	-	189
DEPARTMENT OF DEFENSE	512,464	90,261	283,351	-	43,968	58,056	1,000	35,828	-
DEPT. OF HEALTH, EDUC, & WELFARE	83,519	271	7,105	-	40,603	98	32,028	950	2,464
DEPARTMENT OF THE INTERIOR	3,809	998	1,895	-	683	-	63	97	73
DEPARTMENT OF TRANSPORTATION	9,425	2,163	3,136	-	849	-	60	2,248	969
ATOMIC ENERGY COMMISSION	20,931	226	5,738	-	10,688	3,476	803	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	99,562	20,527	40,270	-	33,262	212	5,291	-	-
NATIONAL SCIENCE FOUNDATION	19,785	55	-	-	18,150	-	1,195	363	22
OFFICE OF ECONOMIC OPPORTUNITY	6,046	-	1,738	-	1,141	-	3,167	-	-
NEW HAMP	27,268	4,236	15,614	-	7,133	-	35	-	250
DEPARTMENT OF AGRICULTURE	1,129	567	-	-	562	-	-	-	-
DEPARTMENT OF COMMERCE	19	-	-	-	-	-	-	-	19
DEPARTMENT OF DEFENSE	14,359	3,296	10,506	-	557	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	3,074	-	-	-	2,914	-	35	-	125
DEPARTMENT OF THE INTERIOR	345	86	-	-	195	-	-	-	64
DEPARTMENT OF TRANSPORTATION	2,799	26	2,731	-	-	-	-	-	42
ATOMIC ENERGY COMMISSION	344	-	296	-	48	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	3,736	175	2,081	-	1,480	-	-	-	-
NATIONAL SCIENCE FOUNDATION	1,463	86	-	-	1,377	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	-	-	-	-	-	-	-	-	-
RHODE ISL	29,911	11,553	7,207	-	9,637	-	1,164	-	350
DEPARTMENT OF AGRICULTURE	466	-	-	-	466	-	-	-	-
DEPARTMENT OF COMMERCE	309	-	71	-	194	-	-	-	44
DEPARTMENT OF DEFENSE	19,843	11,163	6,818	-	1,862	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	4,121	74	170	-	2,917	-	818	-	142
DEPARTMENT OF THE INTERIOR	427	233	-	-	155	-	-	-	39
DEPARTMENT OF TRANSPORTATION	176	51	-	-	-	-	-	-	125
ATOMIC ENERGY COMMISSION	694	-	-	-	694	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	450	32	148	-	269	-	1	-	-
NATIONAL SCIENCE FOUNDATION	3,213	-	-	-	3,062	-	151	-	-
OFFICE OF ECONOMIC OPPORTUNITY	212	-	-	-	18	-	194	-	-

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION, STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

GEOGRAPHIC DIVISION, STATE, AND AGENCY	TOTAL	FEDERAL INTRAMURAL (1)	EXTRAMURAL						
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN BY NON-PROFIT INSTITUTIONS	OTHER
VERMONT	9,452	557	4,292	-	3,490	-	814	-	299
DEPARTMENT OF AGRICULTURE	1,059	512	-	-	547	-	-	-	-
DEPARTMENT OF COMMERCE	21	-	2	-	-	-	-	-	19
DEPARTMENT OF DEFENSE	4,455	-	4,185	-	270	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	2,193	-	-	-	2,053	-	97	-	43
DEPARTMENT OF THE INTERIOR	188	18	-	-	100	-	-	-	70
DEPARTMENT OF TRANSPORTATION	267	-	-	-	100	-	-	-	167
ATOMIC ENERGY COMMISSION	82	19	-	-	63	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	138	8	105	-	25	-	-	-	-
NATIONAL SCIENCE FOUNDATION	392	-	-	-	332	-	60	-	-
OFFICE OF ECONOMIC OPPORTUNITY	657	-	-	-	-	-	657	-	-
M ATLANTIC	2,516,881	333,636	1,608,755	109,009	258,715	79,589	99,884	6,881	20,412
DEPARTMENT OF AGRICULTURE	18,500	13,337	200	-	4,836	-	127	-	-
DEPARTMENT OF COMMERCE	8,705	51	7,813	-	170	-	253	-	418
DEPARTMENT OF DEFENSE	1,483,791	255,611	1,164,472	-	25,851	16,754	21,103	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	219,421	1,547	7,151	-	138,352	1,939	47,700	6,881	15,851
DEPARTMENT OF THE INTERIOR	18,290	11,302	3,647	-	2,110	-	588	-	643
DEPARTMENT OF TRANSPORTATION	50,626	28,460	13,973	-	1,385	-	3,332	-	3,476
ATOMIC ENERGY COMMISSION	233,038	3,308	36,027	109,009	22,870	60,796	1,004	-	24
NATIONAL AERONAUTICS & SPACE ADMIN	410,431	20,020	372,418	-	14,803	100	3,090	-	-
NATIONAL SCIENCE FOUNDATION	47,648	-	570	-	45,530	-	1,548	-	-
OFFICE OF ECONOMIC OPPORTUNITY	26,431	-	2,484	-	2,808	-	21,139	-	-
NEW JERSEY	742,526	152,773	544,941	-	23,791	11,588	6,731	-	2,702
DEPARTMENT OF AGRICULTURE	1,287	452	-	-	835	-	-	-	-
DEPARTMENT OF COMMERCE	248	51	28	-	49	-	-	-	120
DEPARTMENT OF DEFENSE	605,459	119,989	482,363	-	3,066	-	41	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	15,651	-	3,109	-	7,318	-	3,213	-	2,011
DEPARTMENT OF THE INTERIOR	3,437	1,199	1,978	-	144	-	25	-	91
DEPARTMENT OF TRANSPORTATION	34,794	26,996	7,054	-	264	-	-	-	480
ATOMIC ENERGY COMMISSION	16,810	1,068	1,143	-	2,951	11,588	60	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	55,890	3,018	48,696	-	4,176	-	-	-	-
NATIONAL SCIENCE FOUNDATION	5,870	-	570	-	4,825	-	475	-	-
OFFICE OF ECONOMIC OPPORTUNITY	3,080	-	-	-	163	-	2,917	-	-
NEW YORK	1,235,594	77,786	791,155	52,157	166,690	58,909	71,695	3,484	13,718
DEPARTMENT OF AGRICULTURE	8,159	5,919	173	-	1,940	-	127	-	-
DEPARTMENT OF COMMERCE	8,108	-	7,502	-	110	-	253	-	243
DEPARTMENT OF DEFENSE	583,129	50,259	488,691	-	15,089	9,127	19,963	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	141,683	1,221	2,239	-	93,647	474	29,488	3,484	11,130
DEPARTMENT OF THE INTERIOR	3,640	1,844	294	-	1,073	-	65	-	364
DEPARTMENT OF TRANSPORTATION	12,764	1,418	5,784	-	452	-	3,153	-	1,957
ATOMIC ENERGY COMMISSION	121,742	2,240	1,977	52,157	15,453	49,208	683	-	24
NATIONAL AERONAUTICS & SPACE ADMIN	309,123	14,885	284,435	-	7,372	100	2,331	-	-
NATIONAL SCIENCE FOUNDATION	29,263	-	-	-	29,263	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	17,983	-	60	-	2,291	-	15,632	-	-
PENN	538,761	103,077	272,659	56,852	68,234	9,092	21,458	3,397	3,992
DEPARTMENT OF AGRICULTURE	9,054	6,966	27	-	2,061	-	-	-	-
DEPARTMENT OF COMMERCE	349	-	283	-	11	-	-	-	55
DEPARTMENT OF DEFENSE	295,203	85,363	193,418	-	7,696	7,627	1,099	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	62,087	326	1,803	-	37,387	1,465	14,999	3,397	2,710
DEPARTMENT OF THE INTERIOR	11,213	8,259	1,375	-	893	-	498	-	188
DEPARTMENT OF TRANSPORTATION	3,068	46	1,135	-	669	-	179	-	1,039
ATOMIC ENERGY COMMISSION	94,486	-	32,907	56,852	4,466	-	261	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	45,418	2,117	39,287	-	3,255	-	759	-	-
NATIONAL SCIENCE FOUNDATION	12,515	-	-	-	11,442	-	1,073	-	-
OFFICE OF ECONOMIC OPPORTUNITY	5,368	-	2,424	-	354	-	2,590	-	-

DEPARTMENT OF AGRICULTURE	18,500	13,337	200	-	4,836	-	127	-	-
DEPARTMENT OF COMMERCE	8,705	51	7,813	-	170	-	253	-	418
DEPARTMENT OF DEFENSE	1,483,791	255,611	1,164,472	-	25,851	16,754	21,103	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	219,421	1,547	7,151	-	138,352	1,939	47,700	6,881	15,851
DEPARTMENT OF THE INTERIOR	18,290	11,302	3,647	-	2,110	-	588	-	643
DEPARTMENT OF TRANSPORTATION	50,626	28,460	13,973	-	1,385	-	3,332	-	3,476
ATOMIC ENERGY COMMISSION	233,038	3,308	36,027	109,009	22,870	60,796	1,004	-	24
NATIONAL AERONAUTICS & SPACE ADMIN	410,431	20,020	372,418	-	14,803	100	3,090	-	-
NATIONAL SCIENCE FOUNDATION	47,648	-	570	-	45,530	-	1,548	-	-
OFFICE OF ECONOMIC OPPORTUNITY	26,431	-	2,484	-	2,808	-	21,139	-	-
NEW JERSEY	742,526	152,773	544,941	-	23,791	11,588	6,731	-	2,702
DEPARTMENT OF AGRICULTURE	1,287	452	-	-	835	-	-	-	-
DEPARTMENT OF COMMERCE	248	51	28	-	49	-	-	-	120
DEPARTMENT OF DEFENSE	605,459	119,989	482,363	-	3,066	-	41	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	15,651	-	3,109	-	7,318	-	3,213	-	2,011
DEPARTMENT OF THE INTERIOR	3,437	1,199	1,978	-	144	-	25	-	91
DEPARTMENT OF TRANSPORTATION	34,794	26,996	7,054	-	264	-	-	-	480
ATOMIC ENERGY COMMISSION	16,810	1,068	1,143	-	2,951	11,588	60	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	55,890	3,018	48,696	-	4,176	-	-	-	-
NATIONAL SCIENCE FOUNDATION	5,870	-	570	-	4,825	-	475	-	-
OFFICE OF ECONOMIC OPPORTUNITY	3,080	-	-	-	163	-	2,917	-	-
NEW YORK	1,235,594	77,786	791,155	52,157	166,690	58,909	71,695	3,484	13,718
DEPARTMENT OF AGRICULTURE	8,159	5,919	173	-	1,940	-	127	-	-
DEPARTMENT OF COMMERCE	8,108	-	7,502	-	110	-	253	-	243
DEPARTMENT OF DEFENSE	583,129	50,259	488,691	-	15,089	9,127	19,963	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	141,683	1,221	2,239	-	93,647	474	29,488	3,484	11,130
DEPARTMENT OF THE INTERIOR	3,640	1,844	294	-	1,073	-	65	-	364
DEPARTMENT OF TRANSPORTATION	12,764	1,418	5,784	-	452	-	3,153	-	1,957
ATOMIC ENERGY COMMISSION	121,742	2,240	1,977	52,157	15,453	49,208	683	-	24
NATIONAL AERONAUTICS & SPACE ADMIN	309,123	14,885	284,435	-	7,372	100	2,331	-	-
NATIONAL SCIENCE FOUNDATION	29,263	-	-	-	29,263	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	17,983	-	60	-	2,291	-	15,632	-	-
PENN	538,761	103,077	272,659	56,852	68,234	9,092	21,458	3,397	3,992
DEPARTMENT OF AGRICULTURE	9,054	6,966	27	-	2,061	-	-	-	-
DEPARTMENT OF COMMERCE	349	-	283	-	11	-	-	-	55
DEPARTMENT OF DEFENSE	295,203	85,363	193,418	-	7,696	7,627	1,099	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	62,087	326	1,803	-	37,387	1,465	14,999	3,397	2,710
DEPARTMENT OF THE INTERIOR	11,213	8,259	1,375	-	893	-	498	-	188
DEPARTMENT OF TRANSPORTATION	3,068	46	1,135	-	669	-	179	-	1,039
ATOMIC ENERGY COMMISSION	94,486	-	32,907	56,852	4,466	-	261	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	45,418	2,117	39,287	-	3,255	-	759	-	-
NATIONAL SCIENCE FOUNDATION	12,515	-	-	-	11,442	-	1,073	-	-
OFFICE OF ECONOMIC OPPORTUNITY	5,368	-	2,424	-	354	-	2,590	-	-
E N CENTRAL	1,038,771	280,697	355,675	4,777	235,017	79,511	72,907	473	9,714
DEPARTMENT OF AGRICULTURE	29,917	21,034	208	-	8,494	-	176	-	5
DEPARTMENT OF COMMERCE	3,785	2,799	111	-	419	-	115	-	341
DEPARTMENT OF DEFENSE	464,664	172,138	228,602	-	38,606	1,379	23,939	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	135,681	3,145	4,792	-	99,142	1,298	21,646	473	5,185
DEPARTMENT OF THE INTERIOR	8,497	2,838	1,836	-	1,733	-	1,363	-	727
DEPARTMENT OF TRANSPORTATION	51,470	207	43,648	-	3,808	-	366	-	3,441
ATOMIC ENERGY COMMISSION	114,977	441	6,746	4,777	22,024	76,699	4,290	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	167,408	78,095	69,373	-	15,268	135	4,537	-	-
NATIONAL SCIENCE FOUNDATION	42,991	-	98	-	40,107	-	2,771	-	15
OFFICE OF ECONOMIC OPPORTUNITY	19,381	-	261	-	5,416	-	13,704	-	-
ILLINOIS	239,563	27,253	22,221	-	81,289	76,933	27,936	473	3,458
DEPARTMENT OF AGRICULTURE	10,257	8,561	-	-	1,661	-	30	-	5
DEPARTMENT OF COMMERCE	196	-	-	-	158	-	2	-	36
DEPARTMENT OF DEFENSE	61,111	16,189	16,929	-	18,605	99	9,289	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	45,633	431	1,569	-	31,326	-	9,358	473	2,476
DEPARTMENT OF THE INTERIOR	2,231	518	-	-	477	-	1,103	-	133
DEPARTMENT OF TRANSPORTATION	1,945	25	577	-	550	-	-	-	793
ATOMIC ENERGY COMMISSION	86,400	142	445	-	8,997	76,699	117	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	11,304	1,387	2,342	-	4,833	135	2,607	-	-
NATIONAL SCIENCE FOUNDATION	14,804	-	98	-	14,551	-	140	-	15
OFFICE OF ECONOMIC OPPORTUNITY	5,682	-	261	-	131	-	5,290	-	-

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION, STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

GEOGRAPHIC DIVISION, STATE, AND AGENCY	TOTAL	FEDERAL INTRAMURAL (1)	EXTRAMURAL						
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN BY NON-PROFIT INSTITUTIONS	OTHER
INDIANA	91,905	14,016	51,508	-	24,666	-	1,154	-	561
DEPARTMENT OF AGRICULTURE	2,914	1,202	8	-	1,704	-	-	-	-
DEPARTMENT OF COMMERCE	52	-	19	-	14	-	-	-	19
DEPARTMENT OF DEFENSE	59,664	10,056	47,497	-	1,845	-	266	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	10,865	12	293	-	9,694	-	556	-	310
DEPARTMENT OF THE INTERIOR	592	273	-	-	235	-	84	-	-
DEPARTMENT OF TRANSPORTATION	1,641	-	632	-	753	-	24	-	232
ATOMIC ENERGY COMMISSION	3,274	-	-	-	3,274	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	6,855	2,473	3,059	-	1,323	-	-	-	-
NATIONAL SCIENCE FOUNDATION	5,842	-	-	-	5,824	-	18	-	-
OFFICE OF ECONOMIC OPPORTUNITY	206	-	-	-	-	-	206	-	-
MICHIGAN	162,818	25,111	81,355	-	49,894	-	4,295	-	2,163
DEPARTMENT OF AGRICULTURE	3,591	1,909	-	-	1,682	-	-	-	-
DEPARTMENT OF COMMERCE	2,747	2,595	53	-	47	-	-	-	52
DEPARTMENT OF DEFENSE	81,006	18,549	57,257	-	5,146	-	54	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	25,689	265	1,165	-	20,941	-	2,386	-	932
DEPARTMENT OF THE INTERIOR	2,212	470	961	-	363	-	6	-	412
DEPARTMENT OF TRANSPORTATION	3,255	-	629	-	1,859	-	-	-	767
ATOMIC ENERGY COMMISSION	5,447	2	-	-	4,711	-	734	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	28,245	1,321	21,290	-	5,633	-	1	-	-
NATIONAL SCIENCE FOUNDATION	9,543	-	-	-	9,432	-	111	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,083	-	-	-	80	-	1,003	-	-
OHIO	457,342	204,982	170,399	4,777	41,328	-	33,009	-	2,847
DEPARTMENT OF AGRICULTURE	4,383	2,291	200	-	1,825	-	67	-	-
DEPARTMENT OF COMMERCE	288	102	-	-	5	-	113	-	68
DEPARTMENT OF DEFENSE	249,945	127,250	98,099	-	10,306	-	14,290	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	31,887	2,437	1,396	-	19,209	-	7,796	-	1,049
DEPARTMENT OF THE INTERIOR	1,800	621	509	-	413	-	155	-	102
DEPARTMENT OF TRANSPORTATION	44,388	182	41,810	-	426	-	342	-	1,628
ATOMIC ENERGY COMMISSION	15,303	197	4,912	4,777	2,009	-	3,408	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	99,180	71,902	23,473	-	1,876	-	1,929	-	-
NATIONAL SCIENCE FOUNDATION	7,302	-	-	-	4,800	-	2,502	-	-
OFFICE OF ECONOMIC OPPORTUNITY	2,866	-	-	-	459	-	2,407	-	-
WISCONSIN	87,143	9,335	30,192	-	37,840	2,578	6,513	-	685
DEPARTMENT OF AGRICULTURE	8,772	7,071	-	-	1,622	-	79	-	-
DEPARTMENT OF COMMERCE	502	102	39	-	195	-	-	-	166
DEPARTMENT OF DEFENSE	12,938	94	8,820	-	2,704	1,280	40	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	21,607	-	369	-	17,972	1,298	1,550	-	418
DEPARTMENT OF THE INTERIOR	1,662	956	366	-	245	-	15	-	80
DEPARTMENT OF TRANSPORTATION	241	-	-	-	220	-	-	-	21
ATOMIC ENERGY COMMISSION	4,553	100	1,389	-	3,033	-	31	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	21,824	1,012	19,209	-	1,603	-	-	-	-
NATIONAL SCIENCE FOUNDATION	5,500	-	-	-	5,500	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	9,544	-	-	-	4,746	-	4,798	-	-

	[illegible]	[illegible]	[illegible]	-	[illegible]	-	1,154	-	561
DEPARTMENT OF AGRICULTURE	2,914	1,202	8	-	1,704	-	-	-	-
DEPARTMENT OF COMMERCE	52	-	19	-	14	-	-	-	19
DEPARTMENT OF DEFENSE	59,664	10,056	47,497	-	1,845	-	266	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	10,865	12	293	-	9,694	-	556	-	310
DEPARTMENT OF THE INTERIOR	592	273	-	-	235	-	84	-	-
DEPARTMENT OF TRANSPORTATION	1,641	-	632	-	753	-	24	-	232
ATOMIC ENERGY COMMISSION	3,274	-	-	-	3,274	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	6,855	2,473	3,059	-	1,323	-	-	-	-
NATIONAL SCIENCE FOUNDATION	5,842	-	-	-	5,824	-	18	-	-
OFFICE OF ECONOMIC OPPORTUNITY	206	-	-	-	-	-	206	-	-
MICHIGAN	162,818	25,111	81,355	-	49,894	-	4,295	-	2,163
DEPARTMENT OF AGRICULTURE	3,591	1,909	-	-	1,682	-	-	-	-
DEPARTMENT OF COMMERCE	2,747	2,595	53	-	47	-	-	-	52
DEPARTMENT OF DEFENSE	81,006	18,549	57,257	-	5,146	-	54	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	25,689	265	1,165	-	20,941	-	2,386	-	932
DEPARTMENT OF THE INTERIOR	2,212	470	961	-	363	-	6	-	412
DEPARTMENT OF TRANSPORTATION	3,255	-	629	-	1,859	-	-	-	767
ATOMIC ENERGY COMMISSION	5,447	2	-	-	4,711	-	734	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	28,245	1,321	21,290	-	5,633	-	1	-	-
NATIONAL SCIENCE FOUNDATION	9,543	-	-	-	9,432	-	111	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,083	-	-	-	80	-	1,003	-	-
OHIO	457,342	204,982	170,399	4,777	41,328	-	33,009	-	2,847
DEPARTMENT OF AGRICULTURE	4,383	2,291	200	-	1,825	-	67	-	-
DEPARTMENT OF COMMERCE	288	102	-	-	5	-	113	-	68
DEPARTMENT OF DEFENSE	249,945	127,250	98,099	-	10,306	-	14,290	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	31,887	2,437	1,396	-	19,209	-	7,796	-	1,049
DEPARTMENT OF THE INTERIOR	1,800	621	509	-	413	-	155	-	102
DEPARTMENT OF TRANSPORTATION	44,388	182	41,810	-	426	-	342	-	1,628
ATOMIC ENERGY COMMISSION	15,303	197	4,912	4,777	2,009	-	3,408	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	99,180	71,902	23,473	-	1,876	-	1,929	-	-
NATIONAL SCIENCE FOUNDATION	7,302	-	-	-	4,800	-	2,502	-	-
OFFICE OF ECONOMIC OPPORTUNITY	2,866	-	-	-	459	-	2,407	-	-
WISCONSIN	87,143	9,335	30,192	-	37,840	2,578	6,513	-	685
DEPARTMENT OF AGRICULTURE	8,772	7,071	-	-	1,622	-	79	-	-
DEPARTMENT OF COMMERCE	502	102	39	-	195	-	-	-	166
DEPARTMENT OF DEFENSE	12,938	94	8,820	-	2,704	1,280	40	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	21,607	-	369	-	17,972	1,298	1,550	-	418
DEPARTMENT OF THE INTERIOR	1,662	956	366	-	245	-	15	-	80
DEPARTMENT OF TRANSPORTATION	241	-	-	-	220	-	-	-	21
ATOMIC ENERGY COMMISSION	4,553	100	1,389	-	3,033	-	31	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	21,824	1,012	19,209	-	1,603	-	-	-	-
NATIONAL SCIENCE FOUNDATION	5,500	-	-	-	5,500	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	9,544	-	-	-	4,746	-	4,798	-	-
W N CENTRAL	475,375	41,191	314,734	-	88,455	7,476	14,031	5,168	4,320
DEPARTMENT OF AGRICULTURE	27,094	17,817	266	-	8,987	-	24	-	-
DEPARTMENT OF COMMERCE	709	204	218	-	154	-	-	-	133
DEPARTMENT OF DEFENSE	193,701	5,307	179,640	-	8,093	-	661	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	68,229	1,949	591	-	49,741	-	8,643	5,168	2,137
DEPARTMENT OF THE INTERIOR	12,056	7,964	1,224	-	2,100	-	6	-	762
DEPARTMENT OF TRANSPORTATION	2,140	-	473	-	320	-	59	-	1,288
ATOMIC ENERGY COMMISSION	12,686	20	2,099	-	3,010	7,476	81	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	143,239	7,930	130,202	-	5,107	-	-	-	-
NATIONAL SCIENCE FOUNDATION	10,617	-	-	-	10,303	-	314	-	-
OFFICE OF ECONOMIC OPPORTUNITY	4,904	-	21	-	640	-	4,243	-	-
IOWA	32,661	5,976	3,381	-	14,781	7,476	528	-	519
DEPARTMENT OF AGRICULTURE	7,155	5,330	-	-	1,825	-	-	-	-
DEPARTMENT OF COMMERCE	45	-	-	-	26	-	-	-	19
DEPARTMENT OF DEFENSE	2,824	225	1,286	-	1,287	-	26	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	8,697	-	-	-	7,781	-	502	-	414
DEPARTMENT OF THE INTERIOR	488	227	-	-	258	-	-	-	3
DEPARTMENT OF TRANSPORTATION	233	-	-	-	150	-	-	-	83
ATOMIC ENERGY COMMISSION	7,562	-	-	-	86	7,476	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	4,229	194	2,095	-	1,940	-	-	-	-
NATIONAL SCIENCE FOUNDATION	1,428	-	-	-	1,428	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	-	-	-	-	-	-	-	-	-
KANSAS	16,646	2,495	2,512	-	10,844	-	303	-	492
DEPARTMENT OF AGRICULTURE	2,087	1,010	-	-	1,077	-	-	-	-
DEPARTMENT OF COMMERCE	19	-	-	-	-	-	-	-	19
DEPARTMENT OF DEFENSE	2,397	45	1,716	-	636	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	7,227	913	72	-	5,672	-	303	-	267
DEPARTMENT OF THE INTERIOR	697	414	-	-	181	-	-	-	102
DEPARTMENT OF TRANSPORTATION	305	-	201	-	-	-	-	-	104
ATOMIC ENERGY COMMISSION	667	-	-	-	667	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	1,205	113	523	-	569	-	-	-	-
NATIONAL SCIENCE FOUNDATION	1,872	-	-	-	1,872	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	170	-	-	-	170	-	-	-	-

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION, STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

GEOGRAPHIC DIVISION, STATE, AND AGENCY	TOTAL	FEDERAL INTRAMURAL (1)	EXTRAMURAL						
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN BY NON-PROFIT INSTITUTIONS	OTHER
MINNESOTA	109,270	7,988	67,755	-	24,866	-	6,518	958	1,185
DEPARTMENT OF AGRICULTURE	5,037	3,318	150	-	1,569	-	-	-	-
DEPARTMENT OF COMMERCE	208	-	189	-	-	-	-	-	19
DEPARTMENT OF DEFENSE	39,900	26	37,675	-	2,164	-	35	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	22,093	305	519	-	14,219	-	5,217	958	875
DEPARTMENT OF THE INTERIOR	3,692	2,866	105	-	592	-	6	-	123
DEPARTMENT OF TRANSPORTATION	566	-	228	-	170	-	-	-	168
ATOMIC ENERGY COMMISSION	3,492	-	1,834	-	1,658	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	29,989	1,473	27,040	-	1,476	-	-	-	-
NATIONAL SCIENCE FOUNDATION	2,808	-	-	-	2,808	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,485	-	15	-	210	-	1,260	-	-
MISSOURI	291,181	15,900	237,707	-	27,703	-	4,885	4,210	776
DEPARTMENT OF AGRICULTURE	3,544	1,783	89	-	1,648	-	24	-	-
DEPARTMENT OF COMMERCE	90	51	20	-	-	-	-	-	19
DEPARTMENT OF DEFENSE	145,198	4,799	136,411	-	3,388	-	600	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	25,538	731	-	-	17,816	-	2,496	4,210	285
DEPARTMENT OF THE INTERIOR	3,446	2,393	688	-	164	-	-	-	201
DEPARTMENT OF TRANSPORTATION	369	-	39	-	-	-	59	-	271
ATOMIC ENERGY COMMISSION	530	-	-	-	449	-	81	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	107,642	6,143	100,454	-	1,045	-	-	-	-
NATIONAL SCIENCE FOUNDATION	3,015	-	-	-	2,933	-	82	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,809	-	6	-	260	-	1,543	-	-
NEBRASKA	10,648	2,317	2,500	-	5,167	-	121	-	543
DEPARTMENT OF AGRICULTURE	3,182	1,994	-	-	1,188	-	-	-	-
DEPARTMENT OF COMMERCE	19	-	-	-	-	-	-	-	19
DEPARTMENT OF DEFENSE	2,466	180	2,145	-	141	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	3,187	-	-	-	3,068	-	31	-	88
DEPARTMENT OF THE INTERIOR	407	138	-	-	140	-	-	-	129
DEPARTMENT OF TRANSPORTATION	307	-	-	-	-	-	-	-	307
ATOMIC ENERGY COMMISSION	331	-	265	-	66	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	115	5	90	-	20	-	-	-	-
NATIONAL SCIENCE FOUNDATION	544	-	-	-	544	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	90	-	-	-	-	-	90	-	-
N DAKOTA	8,878	4,772	5	-	2,545	-	1,221	-	335
DEPARTMENT OF AGRICULTURE	4,105	3,318	-	-	787	-	-	-	-
DEPARTMENT OF COMMERCE	147	-	-	-	128	-	-	-	19
DEPARTMENT OF DEFENSE	465	-	-	-	465	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	1,111	-	-	-	914	-	89	-	108
DEPARTMENT OF THE INTERIOR	1,642	1,434	-	-	104	-	-	-	104
DEPARTMENT OF TRANSPORTATION	109	-	5	-	-	-	-	-	104
ATOMIC ENERGY COMMISSION	66	20	-	-	46	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	-	-	-	-	-	-	-	-	-
NATIONAL SCIENCE FOUNDATION	133	-	-	-	101	-	32	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,100	-	-	-	-	-	1,100	-	-
S DAKOTA	6,091	1,743	874	-	2,549	-	455	-	470
DEPARTMENT OF AGRICULTURE	1,984	1,064	27	-	893	-	-	-	-
DEPARTMENT OF COMMERCE	181	153	9	-	-	-	-	-	19
DEPARTMENT OF DEFENSE	451	32	407	-	12	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	376	-	-	-	271	-	5	-	100
DEPARTMENT OF THE INTERIOR	1,684	492	431	-	661	-	-	-	100
DEPARTMENT OF TRANSPORTATION	251	-	-	-	-	-	-	-	251
ATOMIC ENERGY COMMISSION	38	-	-	-	38	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	59	2	-	-	57	-	-	-	-
NATIONAL SCIENCE FOUNDATION	817	-	-	-	617	-	200	-	-

DEPARTMENT OF DEFENSE	145,198	4,799	136,411	-	[illegible]	-	[illegible]	[illegible]	[illegible]
DEPT. OF HEALTH, EDUC, & WELFARE	25,538	731	-	-	17,816	-	2,496	4,210	285
DEPARTMENT OF THE INTERIOR	3,446	2,393	688	-	164	-	-	-	201
DEPARTMENT OF TRANSPORTATION	369	-	39	-	-	-	59	-	271
ATOMIC ENERGY COMMISSION	530	-	-	-	449	-	81	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	107,642	6,143	100,454	-	1,045	-	-	-	-
NATIONAL SCIENCE FOUNDATION	3,015	-	-	-	2,933	-	82	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,809	-	6	-	260	-	1,543	-	-
NEBRASKA	10,648	2,317	2,500	-	5,167	-	121	-	543
DEPARTMENT OF AGRICULTURE	3,182	1,994	-	-	1,188	-	-	-	-
DEPARTMENT OF COMMERCE	19	-	-	-	-	-	-	-	19
DEPARTMENT OF DEFENSE	2,466	180	2,145	-	141	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	3,187	-	-	-	3,068	-	31	-	88
DEPARTMENT OF THE INTERIOR	407	138	-	-	140	-	-	-	129
DEPARTMENT OF TRANSPORTATION	307	-	-	-	-	-	-	-	307
ATOMIC ENERGY COMMISSION	331	-	265	-	66	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	115	5	90	-	20	-	-	-	-
NATIONAL SCIENCE FOUNDATION	544	-	-	-	544	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	90	-	-	-	-	-	90	-	-
N DAKOTA	8,878	4,772	5	-	2,545	-	1,221	-	335
DEPARTMENT OF AGRICULTURE	4,105	3,318	-	-	787	-	-	-	-
DEPARTMENT OF COMMERCE	147	-	-	-	128	-	-	-	19
DEPARTMENT OF DEFENSE	465	-	-	-	465	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	1,111	-	-	-	914	-	89	-	108
DEPARTMENT OF THE INTERIOR	1,642	1,434	-	-	104	-	-	-	104
DEPARTMENT OF TRANSPORTATION	109	-	5	-	-	-	-	-	104
ATOMIC ENERGY COMMISSION	66	20	-	-	46	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	-	-	-	-	-	-	-	-	-
NATIONAL SCIENCE FOUNDATION	133	-	-	-	101	-	32	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,100	-	-	-	-	-	1,100	-	-
S DAKOTA	6,091	1,743	874	-	2,549	-	455	-	470
DEPARTMENT OF AGRICULTURE	1,984	1,064	27	-	893	-	-	-	-
DEPARTMENT OF COMMERCE	181	153	9	-	-	-	-	-	19
DEPARTMENT OF DEFENSE	451	32	407	-	12	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	376	-	-	-	271	-	5	-	100
DEPARTMENT OF THE INTERIOR	1,684	492	431	-	661	-	-	-	100
DEPARTMENT OF TRANSPORTATION	251	-	-	-	-	-	-	-	251
ATOMIC ENERGY COMMISSION	38	-	-	-	38	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	59	2	-	-	57	-	-	-	-
NATIONAL SCIENCE FOUNDATION	817	-	-	-	617	-	200	-	-
OFFICE OF ECONOMIC OPPORTUNITY	250	-	-	-	-	-	250	-	-
S ATLANTIC	2,899,229	1,569,396	959,134	8,777	175,813	60,661	75,238	34,072	16,138
DEPARTMENT OF AGRICULTURE	93,130	81,506	333	-	11,221	-	70	-	-
DEPARTMENT OF COMMERCE	63,823	56,192	2,714	-	613	-	76	-	4,228
DEPARTMENT OF DEFENSE	1,349,033	753,186	481,023	-	22,176	49,420	13,200	30,028	-
DEPT. OF HEALTH, EDUC, & WELFARE	367,151	229,366	19,986	-	86,648	989	19,821	2,924	7,417
DEPARTMENT OF THE INTERIOR	36,815	25,281	7,725	-	2,693	-	218	-	898
DEPARTMENT OF TRANSPORTATION	41,578	19,369	10,901	-	1,233	-	5,655	906	3,514
ATOMIC ENERGY COMMISSION	26,604	3,486	5,337	8,727	8,564	-	431	-	59
NATIONAL AERONAUTICS & SPACE ADMIN	832,275	380,553	424,819	50	12,420	5,072	9,221	140	-
NATIONAL SCIENCE FOUNDATION	55,415	13,759	1,191	-	27,383	5,180	7,880	-	22
OFFICE OF ECONOMIC OPPORTUNITY	33,405	6,698	5,105	-	2,862	-	18,666	74	-
DELAWARE	16,299	780	13,699	-	1,593	-	131	-	96
DEPARTMENT OF AGRICULTURE	536	38	-	-	498	-	-	-	-
DEPARTMENT OF COMMERCE	64	-	-	-	30	-	-	-	34
DEPARTMENT OF DEFENSE	919	-	430	-	409	-	80	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	207	-	-	-	155	-	51	-	1
DEPARTMENT OF THE INTERIOR	238	98	-	-	100	-	-	-	40
DEPARTMENT OF TRANSPORTATION	71	-	50	-	-	-	-	-	21
ATOMIC ENERGY COMMISSION	30	-	-	-	30	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	13,872	644	13,219	-	9	-	-	-	-
NATIONAL SCIENCE FOUNDATION	362	-	-	-	362	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	-	-	-	-	-	-	-	-	-

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION, STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

GEOGRAPHIC DIVISION, STATE, AND AGENCY	TOTAL	FEDERAL INTRAMURAL (1)	EXTRAMURAL						
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN BY NON-PROFIT INSTITUTIONS	OTHER
DIST OF COL	468,493	326,455	70,214	-	16,945	1,532	47,920	-	5,427
DEPARTMENT OF AGRICULTURE	17,203	17,097	36	-	70	-	-	-	-
DEPARTMENT OF COMMERCE	18,027	14,139	679	-	22	-	-	-	3,187
DEPARTMENT OF DEFENSE	244,140	188,058	45,067	-	3,033	1,532	6,450	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	41,097	17,940	1,131	-	8,923	-	11,901	-	1,202
DEPARTMENT OF THE INTERIOR	10,076	9,079	650	-	170	-	177	-	-
DEPARTMENT OF TRANSPORTATION	20,279	11,221	3,312	-	391	-	4,339	-	1,016
ATOMIC ENERGY COMMISSION	2,520	1,969	2	-	240	-	309	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	73,909	46,895	17,292	-	1,940	-	7,782	-	-
NATIONAL SCIENCE FOUNDATION	20,882	13,359	545	-	1,654	-	5,302	-	22
OFFICE OF ECONOMIC OPPORTUNITY	20,360	6,698	1,500	-	502	-	11,660	-	-
FLORIDA	824,785	321,497	467,791	-	31,106	-	2,399	-	1,992
DEPARTMENT OF AGRICULTURE	7,103	5,683	107	-	1,298	-	15	-	-
DEPARTMENT OF COMMERCE	4,776	4,122	216	-	187	-	-	-	251
DEPARTMENT OF DEFENSE	382,195	167,170	209,647	-	5,350	-	28	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	16,408	456	1,174	-	12,063	-	1,298	-	1,417
DEPARTMENT OF THE INTERIOR	1,876	1,229	67	-	439	-	5	-	136
DEPARTMENT OF TRANSPORTATION	881	206	249	-	238	-	-	-	188
ATOMIC ENERGY COMMISSION	1,951	-	38	-	1,913	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	399,251	142,631	255,510	-	1,110	-	-	-	-
NATIONAL SCIENCE FOUNDATION	8,206	-	636	-	7,500	-	70	-	-
OFFICE OF ECONOMIC OPPORTUNITY	2,138	-	147	-	1,008	-	983	-	-
GEORGIA	72,265	21,943	21,635	-	22,603	339	3,843	720	1,182
DEPARTMENT OF AGRICULTURE	10,972	8,826	101	-	2,035	-	10	-	-
DEPARTMENT OF COMMERCE	595	407	-	-	84	-	-	-	104
DEPARTMENT OF DEFENSE	25,266	977	19,056	-	4,360	-	873	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	21,852	10,440	15	-	9,266	339	537	720	535
DEPARTMENT OF THE INTERIOR	1,065	450	-	-	402	-	25	-	188
DEPARTMENT OF TRANSPORTATION	823	-	200	-	268	-	-	-	355
ATOMIC ENERGY COMMISSION	1,038	-	8	-	977	-	53	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	4,415	843	2,255	-	1,317	-	-	-	-
NATIONAL SCIENCE FOUNDATION	4,224	-	-	-	3,864	-	360	-	-
OFFICE OF ECONOMIC OPPORTUNITY	2,015	-	-	-	30	-	1,985	-	-
MARYLAND	1,063,359	659,019	295,838	-	40,071	52,449	6,233	5,540	4,209
DEPARTMENT OF AGRICULTURE	41,927	41,040	-	-	887	-	-	-	-
DEPARTMENT OF COMMERCE	36,838	35,585	1,005	-	58	-	-	-	190
DEPARTMENT OF DEFENSE	481,315	275,875	147,579	-	3,613	47,588	1,260	5,400	-
DEPT. OF HEALTH, EDUC, & WELFARE	240,050	196,532	13,590	-	22,051	650	3,948	-	3,279
DEPARTMENT OF THE INTERIOR	11,838	7,025	4,575	-	173	-	-	-	65
DEPARTMENT OF TRANSPORTATION	7,163	2,881							

NATIONAL AERONAUTICS & SPACE ADMIN	73,909	46,895	17,292	-	1,940	-	7,782	-	-
NATIONAL SCIENCE FOUNDATION	20,882	13,359	545	-	1,654	-	5,302	-	22
OFFICE OF ECONOMIC OPPORTUNITY	20,360	6,698	1,500	-	502	-	11,660	-	-
FLORIDA	824,785	321,497	467,791	-	31,106	-	2,399	-	1,992
DEPARTMENT OF AGRICULTURE	7,103	5,683	107	-	1,298	-	15	-	-
DEPARTMENT OF COMMERCE	4,776	4,122	216	-	187	-	-	-	251
DEPARTMENT OF DEFENSE	382,195	167,170	209,647	-	5,350	-	28	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	16,408	456	1,174	-	12,063	-	1,298	-	1,417
DEPARTMENT OF THE INTERIOR	1,876	1,229	67	-	439	-	5	-	136
DEPARTMENT OF TRANSPORTATION	881	206	249	-	238	-	-	-	188
ATOMIC ENERGY COMMISSION	1,951	-	38	-	1,913	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	399,251	142,631	255,510	-	1,110	-	-	-	-
NATIONAL SCIENCE FOUNDATION	8,206	-	636	-	7,500	-	70	-	-
OFFICE OF ECONOMIC OPPORTUNITY	2,138	-	147	-	1,008	-	983	-	-
GEORGIA	72,265	21,943	21,635	-	22,603	339	3,843	720	1,182
DEPARTMENT OF AGRICULTURE	10,972	8,826	101	-	2,035	-	10	-	-
DEPARTMENT OF COMMERCE	595	407	-	-	84	-	-	-	104
DEPARTMENT OF DEFENSE	25,266	977	19,056	-	4,360	-	873	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	21,852	10,440	15	-	9,266	339	537	720	535
DEPARTMENT OF THE INTERIOR	1,065	450	-	-	402	-	25	-	188
DEPARTMENT OF TRANSPORTATION	823	-	200	-	268	-	-	-	355
ATOMIC ENERGY COMMISSION	1,038	-	8	-	977	-	53	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	4,415	843	2,255	-	1,317	-	-	-	-
NATIONAL SCIENCE FOUNDATION	4,224	-	-	-	3,864	-	360	-	-
OFFICE OF ECONOMIC OPPORTUNITY	2,015	-	-	-	30	-	1,985	-	-
MARYLAND	1,063,359	659,019	295,838	-	40,071	52,449	6,233	5,540	4,209
DEPARTMENT OF AGRICULTURE	41,927	41,040	-	-	887	-	-	-	-
DEPARTMENT OF COMMERCE	36,838	35,585	1,005	-	58	-	-	-	190
DEPARTMENT OF DEFENSE	481,315	275,875	147,579	-	3,613	47,588	1,260	5,400	-
DEPT. OF HEALTH, EDUC, & WELFARE	240,050	196,532	13,590	-	22,051	650	3,948	-	3,279
DEPARTMENT OF THE INTERIOR	11,838	7,025	4,575	-	173	-	-	-	65
DEPARTMENT OF TRANSPORTATION	7,163	2,881	3,538	-	10	-	118	-	616
ATOMIC ENERGY COMMISSION	7,907	1,357	3,374	-	3,103	-	14	-	59
NATIONAL AERONAUTICS & SPACE ADMIN	225,796	98,324	119,022	-	3,850	4,211	249	140	-
NATIONAL SCIENCE FOUNDATION	6,799	400	-	-	6,222	-	177	-	-
OFFICE OF ECONOMIC OPPORTUNITY	3,726	-	3,155	-	104	-	467	-	-
N CAROLINA	63,908	12,963	5,632	-	37,148	-	6,162	1,152	851
DEPARTMENT OF AGRICULTURE	5,509	3,118	-	-	2,346	-	45	-	-
DEPARTMENT OF COMMERCE	1,271	865	2	-	232	-	76	-	96
DEPARTMENT OF DEFENSE	11,653	4,667	3,290	-	3,335	-	361	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	30,019	3,233	120	-	23,530	-	1,698	1,078	360
DEPARTMENT OF THE INTERIOR	2,842	629	1,880	-	229	-	5	-	99
DEPARTMENT OF TRANSPORTATION	723	142	-	-	166	-	119	-	296
ATOMIC ENERGY COMMISSION	1,792	135	-	-	1,657	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	2,433	174	308	-	1,019	-	932	-	-
NATIONAL SCIENCE FOUNDATION	5,961	-	-	-	4,004	-	1,957	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,705	-	32	-	630	-	969	74	-
S CAROLINA	17,804	2,739	154	8,777	4,738	-	1,050	-	346
DEPARTMENT OF AGRICULTURE	3,574	2,084	89	-	1,401	-	-	-	-
DEPARTMENT OF COMMERCE	36	-	-	-	-	-	-	-	36
DEPARTMENT OF DEFENSE	542	364	21	-	157	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	1,844	-	-	-	1,654	-	49	-	141
DEPARTMENT OF THE INTERIOR	561	232	-	-	264	-	-	-	65
DEPARTMENT OF TRANSPORTATION	264	-	-	-	160	-	-	-	104
ATOMIC ENERGY COMMISSION	8,875	-	32	8,727	116	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	251	59	12	50	130	-	-	-	-
NATIONAL SCIENCE FOUNDATION	756	-	-	-	756	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,101	-	-	-	100	-	1,001	-	-
VIRGINIA	352,685	218,182	83,401	-	16,134	1,161	6,934	25,534	1,339
DEPARTMENT OF AGRICULTURE	3,778	2,133	-	-	1,645	-	-	-	-
DEPARTMENT OF COMMERCE	2,180	1,074	795	-	-	-	-	-	311
DEPARTMENT OF DEFENSE	202,158	116,070	55,403	-	1,609	300	4,148	24,628	-
DEPT. OF HEALTH, EDUC, & WELFARE	11,789	15	3,846	-	7,267	-	267	-	394
DEPARTMENT OF THE INTERIOR	4,093	3,033	454	-	473	-	-	-	133
DEPARTMENT OF TRANSPORTATION	10,957	4,919	3,552	-	-	-	1,079	906	501
ATOMIC ENERGY COMMISSION	2,466	-	1,883	-	528	-	55	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	111,992	90,938	17,187	-	2,748	861	258	-	-
NATIONAL SCIENCE FOUNDATION	1,888	-	10	-	1,864	-	14	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,384	-	271	-	-	-	1,113	-	-

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION, STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

GEOGRAPHIC DIVISION, STATE, AND AGENCY	TOTAL	FEDERAL INTRAMURAL (1)	EXTRAMURAL						
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN BY NON-PROFIT INSTITUTIONS	OTHER
W VIRGINIA	19,631	5,818	770	-	5,475	5,180	566	1,126	696
DEPARTMENT OF AGRICULTURE	2,528	1,487	-	-	1,041	-	-	-	-
DEPARTMENT OF COMMERCE	36	-	17	-	-	-	-	-	19
DEPARTMENT OF DEFENSE	845	5	530	-	310	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	3,885	750	110	-	1,739	-	72	1,126	88
DEPARTMENT OF THE INTERIOR	4,226	3,506	99	-	443	-	6	-	172
DEPARTMENT OF TRANSPORTATION	417	-	-	-	-	-	-	-	417
ATOMIC ENERGY COMMISSION	25	25	-	-	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	356	45	14	-	297	-	-	-	-
NATIONAL SCIENCE FOUNDATION	6,337	-	-	-	1,157	5,180	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	976	-	-	-	488	-	488	-	-
E S CENTRAL	599,724	211,823	241,653	82,224	46,877	1,868	12,777	-	2,502
DEPARTMENT OF AGRICULTURE	17,644	9,473	40	-	7,993	-	138	-	-
DEPARTMENT OF COMMERCE	1,723	970	45	-	503	-	-	-	205
DEPARTMENT OF DEFENSE	157,327	70,766	79,830	954	3,074	-	2,703	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	33,226	1,598	73	-	25,571	-	5,297	-	687
DEPARTMENT OF THE INTERIOR	5,109	2,630	-	1,372	673	-	82	-	352
DEPARTMENT OF TRANSPORTATION	2,680	140	1,084	-	208	-	-	-	1,248
ATOMIC ENERGY COMMISSION	97,651	197	16,945	76,801	1,830	1,868	-	-	10
NATIONAL AERONAUTICS & SPACE ADMIN	275,506	126,049	143,636	3,097	2,657	-	67	-	-
NATIONAL SCIENCE FOUNDATION	3,710	-	-	-	3,344	-	366	-	-
OFFICE OF ECONOMIC OPPORTUNITY	5,148	-	-	-	1,024	-	4,124	-	-
ALABAMA	357,221	176,435	164,500	-	12,116	-	3,642	-	528
DEPARTMENT OF AGRICULTURE	3,210	1,224	-	-	1,848	-	138	-	-
DEPARTMENT OF COMMERCE	75	-	5	-	5	-	-	-	65
DEPARTMENT OF DEFENSE	81,519	58,169	22,100	-	678	-	572	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	10,660	114	73	-	7,660	-	2,730	-	83
DEPARTMENT OF THE INTERIOR	1,453	1,077	-	-	206	-	82	-	88
DEPARTMENT OF TRANSPORTATION	1,292	-	1,000	-	-	-	-	-	292
ATOMIC ENERGY COMMISSION	78	-	-	-	78	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	258,503	115,851	141,322	-	1,310	-	20	-	-
NATIONAL SCIENCE FOUNDATION	331	-	-	-	331	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	100	-	-	-	-	-	100	-	-
KENTUCKY	20,413	9,237	737	-	9,191	-	631	-	617
DEPARTMENT OF AGRICULTURE	3,448	929	-	-	2,519	-	-	-	-
DEPARTMENT OF COMMERCE	150	-	8	-	123	-	-	-	19
DEPARTMENT OF DEFENSE	5,991	5,359	78	-	554	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	5,798	1,484	-	-	3,765	-	333	-	216
DEPARTMENT OF THE INTERIOR	1,225	946	-	-	210	-	-	-	69
DEPARTMENT OF TRANSPORTATION	397	-	84	-	-	-	-	-	313
ATOMIC ENERGY COMMISSION	618	-	523	-	95	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	842	519	44	-	279	-	-	-	-
NATIONAL SCIENCE FOUNDATION	1,062	-	-	-	840	-	222	-	-
OFFICE OF ECONOMIC OPPORTUNITY	882	-	-	-	806	-	76	-	-
MISSISSIPPI	28,276	16,918	1,631	-	6,121	-	2,991	-	615
DEPARTMENT OF AGRICULTURE	8,501	6,543	-	-	1,958	-	-	-	-
DEPARTMENT OF COMMERCE	1,189	970	32	-	85	-	-	-	102
DEPARTMENT OF DEFENSE	7,529	6,903	257	-	369	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	2,796	-	-	-	2,431	-	321	-	44

NATIONAL SCIENCE FOUNDATION	6,337	-	-	-	[illegible]	[illegible]	[illegible]	-	-	
OFFICE OF ECONOMIC OPPORTUNITY	976	-	-	-	488	-	488	-	-
E S CENTRAL	599,724	211,823	241,653	82,224	46,877	1,868	12,777	-	2,502
DEPARTMENT OF AGRICULTURE	17,644	9,473	40	-	7,993	-	138	-	-
DEPARTMENT OF COMMERCE	1,723	970	45	-	503	-	-	-	205
DEPARTMENT OF DEFENSE	157,327	70,766	79,830	954	3,074	-	2,703	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	33,226	1,598	73	-	25,571	-	5,297	-	687
DEPARTMENT OF THE INTERIOR	5,109	2,630	-	1,372	673	-	82	-	352
DEPARTMENT OF TRANSPORTATION	2,680	140	1,084	-	208	-	-	-	1,248
ATOMIC ENERGY COMMISSION	97,651	197	16,945	76,801	1,830	1,868	-	-	10
NATIONAL AERONAUTICS & SPACE ADMIN	275,506	126,049	143,636	3,097	2,657	-	67	-	-
NATIONAL SCIENCE FOUNDATION	3,710	-	-	-	3,344	-	366	-	-
OFFICE OF ECONOMIC OPPORTUNITY	5,148	-	-	-	1,024	-	4,124	-	-
ALABAMA	357,221	176,435	164,500	-	12,116	-	3,642	-	528
DEPARTMENT OF AGRICULTURE	3,210	1,224	-	-	1,848	-	138	-	-
DEPARTMENT OF COMMERCE	75	-	5	-	5	-	-	-	65
DEPARTMENT OF DEFENSE	81,519	58,169	22,100	-	678	-	572	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	10,660	114	73	-	7,660	-	2,730	-	83
DEPARTMENT OF THE INTERIOR	1,453	1,077	-	-	206	-	82	-	88
DEPARTMENT OF TRANSPORTATION	1,292	-	1,000	-	-	-	-	-	292
ATOMIC ENERGY COMMISSION	78	-	-	-	78	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	258,503	115,851	141,322	-	1,310	-	20	-	-
NATIONAL SCIENCE FOUNDATION	331	-	-	-	331	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	100	-	-	-	-	-	100	-	-
KENTUCKY	20,413	9,237	737	-	9,191	-	631	-	617
DEPARTMENT OF AGRICULTURE	3,448	929	-	-	2,519	-	-	-	-
DEPARTMENT OF COMMERCE	150	-	8	-	123	-	-	-	19
DEPARTMENT OF DEFENSE	5,991	5,359	78	-	554	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	5,798	1,484	-	-	3,765	-	333	-	216
DEPARTMENT OF THE INTERIOR	1,225	946	-	-	210	-	-	-	69
DEPARTMENT OF TRANSPORTATION	397	-	84	-	-	-	-	-	313
ATOMIC ENERGY COMMISSION	618	-	523	-	95	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	842	519	44	-	279	-	-	-	-
NATIONAL SCIENCE FOUNDATION	1,062	-	-	-	840	-	222	-	-
OFFICE OF ECONOMIC OPPORTUNITY	882	-	-	-	806	-	76	-	-
MISSISSIPPI	28,276	16,918	1,631	-	6,121	-	2,991	-	615
DEPARTMENT OF AGRICULTURE	8,501	6,543	-	-	1,958	-	-	-	-
DEPARTMENT OF COMMERCE	1,189	970	32	-	85	-	-	-	102
DEPARTMENT OF DEFENSE	7,529	6,903	257	-	369	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	2,796	-	-	-	2,431	-	321	-	44
DEPARTMENT OF THE INTERIOR	459	203	-	-	142	-	-	-	114
DEPARTMENT OF TRANSPORTATION	693	140	-	-	198	-	-	-	355
ATOMIC ENERGY COMMISSION	73	59	-	-	14	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	3,905	2,100	1,342	-	416	-	47	-	-
NATIONAL SCIENCE FOUNDATION	393	-	-	-	378	-	15	-	-
OFFICE OF ECONOMIC OPPORTUNITY	2,738	-	-	-	130	-	2,608	-	-
TENNESSEE	193,814	9,233	74,785	82,224	19,449	1,868	5,513	-	742
DEPARTMENT OF AGRICULTURE	2,485	777	40	-	1,568	-	-	-	-
DEPARTMENT OF COMMERCE	309	-	-	-	290	-	-	-	19
DEPARTMENT OF DEFENSE	62,288	335	57,395	954	1,473	-	2,131	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	13,972	-	-	-	11,715	-	1,913	-	344
DEPARTMENT OF THE INTERIOR	1,972	404	-	1,372	115	-	-	-	81
DEPARTMENT OF TRANSPORTATION	298	-	-	-	10	-	-	-	288
ATOMIC ENERGY COMMISSION	96,882	138	16,422	76,801	1,643	1,868	-	-	10
NATIONAL AERONAUTICS & SPACE ADMIN	12,256	7,579	928	3,097	652	-	-	-	-
NATIONAL SCIENCE FOUNDATION	1,924	-	-	-	1,795	-	129	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,428	-	-	-	88	-	1,340	-	-
W S CENTRAL	834,880	202,280	522,174	-	87,309	-	13,224	2,262	7,631
DEPARTMENT OF AGRICULTURE	25,715	18,977	71	-	6,557	-	110	-	-
DEPARTMENT OF COMMERCE	4,416	1,985	1,654	-	320	-	-	-	457
DEPARTMENT OF DEFENSE	209,051	30,770	167,715	-	9,750	-	816	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	54,704	788	254	-	43,168	-	5,495	2,062	2,937
DEPARTMENT OF THE INTERIOR	7,294	5,011	470	-	665	-	10	-	1,138
DEPARTMENT OF TRANSPORTATION	14,458	6,878	3,255	-	658	-	598	-	3,069
ATOMIC ENERGY COMMISSION	6,334	407	2,062	-	3,640	-	225	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	496,091	137,464	346,240	-	11,152	-	1,235	-	-
NATIONAL SCIENCE FOUNDATION	10,680	-	-	-	10,594	-	56	-	30
OFFICE OF ECONOMIC OPPORTUNITY	6,137	-	453	-	805	-	4,679	200	-

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION, STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

GEOGRAPHIC DIVISION, STATE, AND AGENCY	TOTAL	FEDERAL INTRAMURAL (1)	EXTRAMURAL						
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN BY NON-PROFIT INSTITUTIONS	OTHER
ARKANSAS	9,787	1,072	2,236	-	4,796	-	880	-	803
DEPARTMENT OF AGRICULTURE	1,840	361	-	-	1,479	-	-	-	-
DEPARTMENT OF COMMERCE	182	51	37	-	75	-	-	-	19
DEPARTMENT OF DEFENSE	433	20	371	-	42	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	3,261	-	-	-	2,512	-	146	-	603
DEPARTMENT OF THE INTERIOR	782	622	-	-	140	-	-	-	20
DEPARTMENT OF TRANSPORTATION	286	-	-	-	-	-	140	-	146
ATOMIC ENERGY COMMISSION	1,998	15	1,828	-	155	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	63	3	-	-	60	-	-	-	-
NATIONAL SCIENCE FOUNDATION	383	-	-	-	333	-	35	-	15
OFFICE OF ECONOMIC OPPORTUNITY	559	-	-	-	-	-	559	-	-
LOUISIANA	146,488	19,010	107,902	-	15,286	-	2,344	-	1,946
DEPARTMENT OF AGRICULTURE	11,556	10,240	-	-	1,316	-	-	-	-
DEPARTMENT OF COMMERCE	484	102	48	-	130	-	-	-	204
DEPARTMENT OF DEFENSE	2,750	114	1,779	-	857	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	10,999	539	-	-	8,318	-	1,286	-	856
DEPARTMENT OF THE INTERIOR	625	327	-	-	122	-	5	-	171
DEPARTMENT OF TRANSPORTATION	979	-	24	-	255	-	-	-	700
ATOMIC ENERGY COMMISSION	277	-	-	-	277	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	114,454	7,688	106,051	-	715	-	-	-	-
NATIONAL SCIENCE FOUNDATION	3,204	-	-	-	3,189	-	-	-	15
OFFICE OF ECONOMIC OPPORTUNITY	1,160	-	-	-	107	-	1,053	-	-
OKLAHOMA	29,483	12,164	4,538	-	8,230	-	3,837	-	714
DEPARTMENT OF AGRICULTURE	2,740	1,509	20	-	1,211	-	-	-	-
DEPARTMENT OF COMMERCE	869	763	2	-	85	-	-	-	19
DEPARTMENT OF DEFENSE	5,069	1,143	2,786	-	1,140	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	5,388	-	27	-	3,515	-	1,536	-	310
DEPARTMENT OF THE INTERIOR	2,064	1,804	-	-	147	-	-	-	113
DEPARTMENT OF TRANSPORTATION	8,847	6,749	1,600	-	226	-	-	-	272
ATOMIC ENERGY COMMISSION	130	-	-	-	130	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	1,265	196	103	-	966	-	-	-	-
NATIONAL SCIENCE FOUNDATION	704	-	-	-	683	-	21	-	-
OFFICE OF ECONOMIC OPPORTUNITY	2,407	-	-	-	127	-	2,280	-	-
TEXAS	649,122	170,034	407,498	-	58,997	-	6,163	2,262	4,168
DEPARTMENT OF AGRICULTURE	9,579	6,867	51	-	2,551	-	110	-	-
DEPARTMENT OF COMMERCE	2,881	1,069	1,567	-	30	-	-	-	215
DEPARTMENT OF DEFENSE	200,799	29,493	162,779	-	7,711	-	816	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	35,056	249	227	-	28,823	-	2,527	2,062	1,168
DEPARTMENT OF THE INTERIOR	3,823	2,258	470	-	256	-	5	-	834
DEPARTMENT OF TRANSPORTATION	4,346	129	1,631	-	177	-	458	-	1,951
ATOMIC ENERGY COMMISSION	3,929	392	234	-	3,078	-	225	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	380,309	129,577	240,086	-	9,411	-	1,235	-	-
NATIONAL SCIENCE FOUNDATION	6,389	-	-	-	6,389	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	2,011	-	453	-	571	-	787	200	-
MOUNTAIN	1,136,820	283,295	415,602	193,555	73,145	143,051	20,466	3,385	4,321

DEPARTMENT OF AGRICULTURE	11,556	10,240	-	-	1,316	-	-	-	-
DEPARTMENT OF COMMERCE	484	102	48	-	130	-	-	-	204
DEPARTMENT OF DEFENSE	2,750	114	1,779	-	857	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	10,999	539	-	-	8,318	-	1,286	-	856
DEPARTMENT OF THE INTERIOR	625	327	-	-	122	-	5	-	171
DEPARTMENT OF TRANSPORTATION	979	-	24	-	255	-	-	-	700
ATOMIC ENERGY COMMISSION	277	-	-	-	277	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	114,454	7,688	106,051	-	715	-	-	-	-
NATIONAL SCIENCE FOUNDATION	3,204	-	-	-	3,189	-	-	-	15
OFFICE OF ECONOMIC OPPORTUNITY	1,160	-	-	-	107	-	1,053	-	-
OKLAHOMA	29,483	12,164	4,538	-	8,230	-	3,837	-	714
DEPARTMENT OF AGRICULTURE	2,740	1,509	20	-	1,211	-	-	-	-
DEPARTMENT OF COMMERCE	869	763	2	-	85	-	-	-	19
DEPARTMENT OF DEFENSE	5,069	1,143	2,786	-	1,140	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	5,388	-	27	-	3,515	-	1,536	-	310
DEPARTMENT OF THE INTERIOR	2,064	1,804	-	-	147	-	-	-	113
DEPARTMENT OF TRANSPORTATION	8,847	6,749	1,600	-	226	-	-	-	272
ATOMIC ENERGY COMMISSION	130	-	-	-	130	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	1,265	196	103	-	966	-	-	-	-
NATIONAL SCIENCE FOUNDATION	704	-	-	-	683	-	21	-	-
OFFICE OF ECONOMIC OPPORTUNITY	2,407	-	-	-	127	-	2,280	-	-
TEXAS	649,122	170,034	407,498	-	58,997	-	6,163	2,262	4,168
DEPARTMENT OF AGRICULTURE	9,579	6,867	51	-	2,551	-	110	-	-
DEPARTMENT OF COMMERCE	2,881	1,069	1,567	-	30	-	-	-	215
DEPARTMENT OF DEFENSE	200,799	29,493	162,779	-	7,711	-	816	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	35,056	249	227	-	28,823	-	2,527	2,062	1,168
DEPARTMENT OF THE INTERIOR	3,823	2,258	470	-	256	-	5	-	834
DEPARTMENT OF TRANSPORTATION	4,346	129	1,631	-	177	-	458	-	1,951
ATOMIC ENERGY COMMISSION	3,929	392	234	-	3,078	-	225	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	380,309	129,577	240,086	-	9,411	-	1,235	-	-
NATIONAL SCIENCE FOUNDATION	6,389	-	-	-	6,389	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	2,011	-	453	-	571	-	787	200	-
MOUNTAIN	1,136,820	283,295	415,602	193,555	73,145	143,051	20,466	3,385	4,321
DEPARTMENT OF AGRICULTURE	22,757	16,830	-	-	5,877	-	44	-	6
DEPARTMENT OF COMMERCE	12,831	12,040	53	-	655	-	-	-	83
DEPARTMENT OF DEFENSE	384,105	199,081	151,885	14,134	10,221	3,352	5,432	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	37,000	4,794	49	-	22,351	656	6,656	956	1,538
DEPARTMENT OF THE INTERIOR	34,792	26,117	2,164	-	4,773	-	25	-	1,713
DEPARTMENT OF TRANSPORTATION	1,885	294	373	-	243	-	-	-	975
ATOMIC ENERGY COMMISSION	449,083	7,875	135,708	178,274	3,097	119,556	2,138	2,429	6
NATIONAL AERONAUTICS & SPACE ADMIN	156,212	16,264	125,274	1,147	7,933	2,073	3,521	-	-
NATIONAL SCIENCE FOUNDATION	33,859	-	96	-	16,094	17,414	255	-	-
OFFICE OF ECONOMIC OPPORTUNITY	4,296	-	-	-	1,901	-	2,395	-	-
ARIZONA	72,803	31,606	23,804	-	8,608	6,419	1,852	-	514
DEPARTMENT OF AGRICULTURE	5,131	4,267	-	-	864	-	-	-	-
DEPARTMENT OF COMMERCE	6	-	2	-	-	-	-	-	4
DEPARTMENT OF DEFENSE	42,040	22,289	18,853	-	878	-	20	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	4,727	1,586	-	-	2,099	-	921	-	121
DEPARTMENT OF THE INTERIOR	2,711	1,846	328	-	227	-	25	-	285
DEPARTMENT OF TRANSPORTATION	513	-	294	-	115	-	-	-	104
ATOMIC ENERGY COMMISSION	447	-	-	-	447	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	8,341	1,618	4,327	-	1,594	-	802	-	-
NATIONAL SCIENCE FOUNDATION	8,065	-	-	-	1,646	6,419	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	822	-	-	-	738	-	84	-	-
COLORADO	274,113	41,189	181,669	-	29,156	12,968	7,930	-	1,201
DEPARTMENT OF AGRICULTURE	4,389	3,335	-	-	1,004	-	44	-	6
DEPARTMENT OF COMMERCE	12,508	12,040	-	-	430	-	-	-	38
DEPARTMENT OF DEFENSE	75,331	4,404	66,981	-	3,655	-	291	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	17,082	823	29	-	10,586	-	5,004	-	640
DEPARTMENT OF THE INTERIOR	13,476	11,369	675	-	1,122	-	-	-	310
DEPARTMENT OF TRANSPORTATION	452	204	37	-	4	-	-	-	207
ATOMIC ENERGY COMMISSION	2,228	113	940	-	1,145	-	30	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	128,774	8,901	113,007	-	2,829	1,973	2,064	-	-
NATIONAL SCIENCE FOUNDATION	19,570	-	-	-	8,320	10,995	255	-	-
OFFICE OF ECONOMIC OPPORTUNITY	303	-	-	-	61	-	242	-	-

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION, STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

GEOGRAPHIC DIVISION, STATE, AND AGENCY	TOTAL	FEDERAL INTRAMURAL (1)	EXTRAMURAL						
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN BY NON-PROFIT INSTITUTIONS	OTHER
IDAHO	75,008	4,661	-	52,092	1,821	13,443	133	2,429	429
DEPARTMENT OF AGRICULTURE	3,534	2,743	-	-	791	-	-	-	-
DEPARTMENT OF COMMERCE	-	-	-	-	-	-	-	-	-
DEPARTMENT OF DEFENSE	241	96	-	-	145	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	298	-	-	-	61	-	-	-	237
DEPARTMENT OF THE INTERIOR	1,287	885	-	-	237	-	-	-	165
DEPARTMENT OF TRANSPORTATION	21	-	-	-	-	-	-	-	21
ATOMIC ENERGY COMMISSION	68,144	492	-	51,661	8	13,443	105	2,429	6
NATIONAL AERONAUTICS & SPACE ADMIN	900	445	-	431	24	-	-	-	-
NATIONAL SCIENCE FOUNDATION	555	-	-	-	555	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	28	-	-	-	-	-	28	-	-
MONTANA	11,646	5,827	1,933	-	2,556	-	772	-	558
DEPARTMENT OF AGRICULTURE	3,577	2,699	-	-	878	-	-	-	-
DEPARTMENT OF COMMERCE	206	-	45	-	142	-	-	-	19
DEPARTMENT OF DEFENSE	2,018	90	1,888	-	40	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	2,626	2,045	-	-	518	-	62	-	1
DEPARTMENT OF THE INTERIOR	1,768	993	-	-	362	-	-	-	413
DEPARTMENT OF TRANSPORTATION	125	-	-	-	-	-	-	-	125
ATOMIC ENERGY COMMISSION	12	-	-	-	12	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	582	-	-	-	-	-	582	-	-
NATIONAL SCIENCE FOUNDATION	604	-	-	-	604	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	128	-	-	-	-	-	128	-	-
NEVADA	190,948	35,302	138,593	3,956	2,711	9,746	369	-	271
DEPARTMENT OF AGRICULTURE	726	282	-	-	444	-	-	-	-
DEPARTMENT OF COMMERCE	24	-	-	-	18	-	-	-	6
DEPARTMENT OF DEFENSE	28,938	21,575	6,964	-	399	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	454	110	-	-	136	-	102	-	106
DEPARTMENT OF THE INTERIOR	4,371	3,370	-	-	854	-	-	-	147
DEPARTMENT OF TRANSPORTATION	38	-	26	-	-	-	-	-	12
ATOMIC ENERGY COMMISSION	152,028	6,847	130,970	3,956	242	9,746	267	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	3,974	3,118	633	-	223	-	-	-	-
NATIONAL SCIENCE FOUNDATION	395	-	-	-	395	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	-	-	-	-	-	-	-	-	-
NEW MEXICO	444,089	138,774	50,555	137,507	9,942	99,819	6,146	956	390
DEPARTMENT OF AGRICULTURE	1,607	955	-	-	652	-	-	-	-
DEPARTMENT OF COMMERCE	43	-	6	-	33	-	-	-	4
DEPARTMENT OF DEFENSE	196,658	134,132	39,302	14,134	2,531	3,352	3,207	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	2,867	-	-	-	1,597	-	277	956	37
DEPARTMENT OF THE INTERIOR	2,815	1,151	1,055	-	460	-	-	-	149
DEPARTMENT OF TRANSPORTATION	410	90	-	-	120	-	-	-	200
ATOMIC ENERGY COMMISSION	224,957	423	3,766	122,657	8	96,367	1,736	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	12,076	2,023	6,330	716	2,859	100	48	-	-
NATIONAL SCIENCE FOUNDATION	1,045	-	96	-	949	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,611	-	-	-	733	-	878	-	-
UTAH	61,052	21,712	19,047	-	15,689	656	3,249	-	699
DEPARTMENT OF AGRICULTURE	2,821	2,134	-	-	687	-	-	-	-
DEPARTMENT OF COMMERCE	17	-	-	-	9	-	-	-	8
DEPARTMENT OF DEFENSE	38,858	16,495	17,897	-	2,552	-	1,914	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	8,738	230	20	-	7,173	656	275	-	384
DEPARTMENT OF THE INTERIOR	3,674	2,700	105	-	743	-	-	-	126
DEPARTMENT OF TRANSPORTATION	201	-	16	-	4	-	-	-	181

ATOMIC ENERGY COMMISSION									
NATIONAL AERONAUTICS & SPACE ADMIN	582								
NATIONAL SCIENCE FOUNDATION	604	-	-	-	604	-	-		
OFFICE OF ECONOMIC OPPORTUNITY	128	-	-	-	-	-	128	-	-
NEVADA	190,948	35,302	138,593	3,956	2,711	9,746	369	-	271
DEPARTMENT OF AGRICULTURE	726	282	-	-	444	-	-	-	-
DEPARTMENT OF COMMERCE	24	-	-	-	18	-	-	-	6
DEPARTMENT OF DEFENSE	28,938	21,575	6,964	-	399	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	454	110	-	-	136	-	102	-	106
DEPARTMENT OF THE INTERIOR	4,371	3,370	-	-	854	-	-	-	147
DEPARTMENT OF TRANSPORTATION	38	-	26	-	-	-	-	-	12
ATOMIC ENERGY COMMISSION	152,028	6,847	130,970	3,956	242	9,746	267	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	3,974	3,118	633	-	223	-	-	-	-
NATIONAL SCIENCE FOUNDATION	395	-	-	-	395	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	-	-	-	-	-	-	-	-	-
NEW MEXICO	444,089	138,774	50,555	137,507	9,942	99,819	6,146	956	390
DEPARTMENT OF AGRICULTURE	1,607	955	-	-	652	-	-	-	-
DEPARTMENT OF COMMERCE	43	-	6	-	33	-	-	-	4
DEPARTMENT OF DEFENSE	196,658	134,132	39,302	14,134	2,531	3,352	3,207	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	2,867	-	-	-	1,597	-	277	956	37
DEPARTMENT OF THE INTERIOR	2,815	1,151	1,055	-	460	-	-	-	149
DEPARTMENT OF TRANSPORTATION	410	90	-	-	120	-	-	-	200
ATOMIC ENERGY COMMISSION	224,957	423	3,766	122,657	8	96,367	1,736	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	12,076	2,023	6,330	716	2,859	100	48	-	-
NATIONAL SCIENCE FOUNDATION	1,045	-	96	-	949	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,611	-	-	-	733	-	878	-	-
UTAH	61,052	21,712	19,047	-	15,689	656	3,249	-	699
DEPARTMENT OF AGRICULTURE	2,821	2,134	-	-	687	-	-	-	-
DEPARTMENT OF COMMERCE	17	-	-	-	9	-	-	-	8
DEPARTMENT OF DEFENSE	38,858	16,495	17,897	-	2,552	-	1,914	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	8,738	230	20	-	7,173	656	275	-	384
DEPARTMENT OF THE INTERIOR	3,674	2,700	105	-	743	-	-	-	126
DEPARTMENT OF TRANSPORTATION	201	-	16	-	4	-	-	-	181
ATOMIC ENERGY COMMISSION	1,195	-	32	-	1,163	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	1,442	153	977	-	287	-	25	-	-
NATIONAL SCIENCE FOUNDATION	2,702	-	-	-	2,702	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,404	-	-	-	369	-	1,035	-	-
WYOMING	7,161	4,224	1	-	2,662	-	15	-	259
DEPARTMENT OF AGRICULTURE	972	415	-	-	557	-	-	-	-
DEPARTMENT OF COMMERCE	27	-	-	-	23	-	-	-	4
DEPARTMENT OF DEFENSE	21	-	-	-	21	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	208	-	-	-	181	-	15	-	12
DEPARTMENT OF THE INTERIOR	4,690	3,803	1	-	768	-	-	-	118
DEPARTMENT OF TRANSPORTATION	125	-	-	-	-	-	-	-	125
ATOMIC ENERGY COMMISSION	72	-	-	-	72	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	123	6	-	-	117	-	-	-	-
NATIONAL SCIENCE FOUNDATION	923	-	-	-	923	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	-	-	-	-	-	-	-	-	-
PACIFIC	4,404,125	594,879	2,949,708	32,061	270,304	311,393	76,893	151,914	16,973
DEPARTMENT OF AGRICULTURE	31,756	25,889	36	-	5,748	-	82	-	1
DEPARTMENT OF COMMERCE	16,528	10,841	2,642	-	613	-	651	3	1,778
DEPARTMENT OF DEFENSE	2,432,860	369,439	1,891,327	-	47,328	10,945	24,445	88,907	469
DEPT. OF HEALTH, EDUC, & WELFARE	177,202	2,483	3,367	-	117,525	3,051	33,293	8,321	9,162
DEPARTMENT OF THE INTERIOR	28,221	16,591	7,294	-	2,287	-	171	-	1,878
DEPARTMENT OF TRANSPORTATION	137,538	6,150	125,593	-	2,070	-	185	-	3,540
ATOMIC ENERGY COMMISSION	370,467	1,407	85,344	32,061	19,410	178,130	648	53,322	145
NATIONAL AERONAUTICS & SPACE ADMIN	1,144,249	162,079	832,886	-	25,374	119,193	3,878	839	-
NATIONAL SCIENCE FOUNDATION	48,862	-	850	-	46,529	74	925	484	-
OFFICE OF ECONOMIC OPPORTUNITY	16,442	-	369	-	3,420	-	12,615	38	-

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION, STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

GEOGRAPHIC DIVISION, STATE, AND AGENCY	TOTAL	FEDERAL INTRAMURAL (1)	EXTRAMURAL						
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY INDUSTRIAL FIRMS	UNIVERSITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NON-PROFIT INSTITUTIONS	FFRDCS ADMIN BY NON-PROFIT INSTITUTIONS	OTHER
ALASKA	43,179	10,849	23,886	-	5,586	-	1,187	-	1,671
DEPARTMENT OF AGRICULTURE	1,524	1,133	-	-	391	-	-	-	-
DEPARTMENT OF COMMERCE	3,081	2,443	-	-	21	-	-	-	617
DEPARTMENT OF DEFENSE	4,418	2,450	148	-	1,820	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	1,467	766	100	-	536	-	-	-	65
DEPARTMENT OF THE INTERIOR	4,641	3,581	-	-	196	-	-	-	864
DEPARTMENT OF TRANSPORTATION	125	-	-	-	-	-	-	-	125
ATOMIC ENERGY COMMISSION	21,603	462	20,869	-	272	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	3,085	14	2,769	-	302	-	-	-	-
NATIONAL SCIENCE FOUNDATION	1,980	-	-	-	1,980	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,255	-	-	-	68	-	1,187	-	-
CALIFORNIA	3,871,053	547,625	2,607,021	31,723	205,835	308,257	63,179	96,531	10,882
DEPARTMENT OF AGRICULTURE	18,296	16,094	28	-	2,144	-	30	-	-
DEPARTMENT OF COMMERCE	5,411	2,139	2,642	-	105	-	252	3	270
DEPARTMENT OF DEFENSE	2,220,160	359,029	1,701,174	-	38,763	8,405	23,882	88,907	-
DEPT. OF HEALTH, EDUC, & WELFARE	135,229	1,194	3,210	-	86,988	2,455	27,477	6,480	7,425
DEPARTMENT OF THE INTERIOR	14,287	5,262	7,264	-	1,342	-	15	-	404
DEPARTMENT OF TRANSPORTATION	18,685	4,474	9,378	-	1,920	-	130	-	2,783
ATOMIC ENERGY COMMISSION	284,123	534	58,270	31,723	15,064	178,130	382	20	-
NATIONAL AERONAUTICS & SPACE ADMIN	1,129,095	158,899	823,836	-	22,930	119,193	3,638	599	-
NATIONAL SCIENCE FOUNDATION	35,921	-	850	-	33,726	74	787	484	-
OFFICE OF ECONOMIC OPPORTUNITY	9,846	-	369	-	2,853	-	6,586	38	-
HAWAII	43,815	9,231	21,149	-	10,756	-	1,833	-	846
DEPARTMENT OF AGRICULTURE	1,324	751	-	-	521	-	52	-	-
DEPARTMENT OF COMMERCE	1,709	1,577	-	-	12	-	-	-	120
DEPARTMENT OF DEFENSE	22,198	4,525	15,836	-	1,780	-	57	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	4,037	195	-	-	2,915	-	506	-	421
DEPARTMENT OF THE INTERIOR	905	668	-	-	160	-	-	-	77
DEPARTMENT OF TRANSPORTATION	83	-	-	-	-	-	-	-	83
ATOMIC ENERGY COMMISSION	3,240	-	2,544	-	551	-	-	-	145
NATIONAL AERONAUTICS & SPACE ADMIN	5,387	1,515	2,769	-	1,103	-	-	-	-
NATIONAL SCIENCE FOUNDATION	3,852	-	-	-	3,714	-	138	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,080	-	-	-	-	-	1,080	-	-
OREGON	33,848	8,338	127	-	14,898	596	6,401	1,841	1,647
DEPARTMENT OF AGRICULTURE	5,026	3,893	-	-	1,133	-	-	-	-
DEPARTMENT OF COMMERCE	804	102	-	-	48	-	192	-	462
DEPARTMENT OF DEFENSE	3,025	72	34	-	2,638	-	281	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	15,464	-	14	-	8,480	596	3,772	1,841	761
DEPARTMENT OF THE INTERIOR	4,533	3,947	-	-	378	-	-	-	208
DEPARTMENT OF TRANSPORTATION	216	-	-	-	-	-	-	-	216
ATOMIC ENERGY COMMISSION	1,266	296	-	-	970	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	607	28	79	-	500	-	-	-	-
NATIONAL SCIENCE FOUNDATION	351	-	-	-	351	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	2,556	-	-	-	400	-	2,156	-	-

DEPARTMENT OF AGRICULTURE	18,296	16,094	28	-	2,144	-	30	-	-
DEPARTMENT OF COMMERCE	5,411	2,139	2,642	-	105	-	252	3	270
DEPARTMENT OF DEFENSE	2,220,160	359,029	1,701,174	-	38,763	8,405	23,882	88,907	-
DEPT. OF HEALTH, EDUC, & WELFARE	135,229	1,194	3,210	-	86,988	2,455	27,477	6,480	7,425
DEPARTMENT OF THE INTERIOR	14,287	5,262	7,264	-	1,342	-	15	-	404
DEPARTMENT OF TRANSPORTATION	18,685	4,474	9,378	-	1,920	-	130	-	2,783
ATOMIC ENERGY COMMISSION	284,123	534	58,270	31,723	15,064	178,130	382	20	-
NATIONAL AERONAUTICS & SPACE ADMIN	1,129,095	158,899	823,836	-	22,930	119,193	3,638	599	-
NATIONAL SCIENCE FOUNDATION	35,921	-	850	-	33,726	74	787	484	-
OFFICE OF ECONOMIC OPPORTUNITY	9,846	-	369	-	2,853	-	6,586	38	-
HAWAII	43,815	9,231	21,149	-	10,756	-	1,833	-	846
DEPARTMENT OF AGRICULTURE	1,324	751	-	-	521	-	52	-	-
DEPARTMENT OF COMMERCE	1,709	1,577	-	-	12	-	-	-	120
DEPARTMENT OF DEFENSE	22,198	4,525	15,836	-	1,780	-	57	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	4,037	195	-	-	2,915	-	506	-	421
DEPARTMENT OF THE INTERIOR	905	668	-	-	160	-	-	-	77
DEPARTMENT OF TRANSPORTATION	83	-	-	-	-	-	-	-	83
ATOMIC ENERGY COMMISSION	3,240	-	2,544	-	551	-	-	-	145
NATIONAL AERONAUTICS & SPACE ADMIN	5,387	1,515	2,769	-	1,103	-	-	-	-
NATIONAL SCIENCE FOUNDATION	3,852	-	-	-	3,714	-	138	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,080	-	-	-	-	-	1,080	-	-
OREGON	33,848	8,338	127	-	14,898	596	6,401	1,841	1,647
DEPARTMENT OF AGRICULTURE	5,026	3,893	-	-	1,133	-	-	-	-
DEPARTMENT OF COMMERCE	804	102	-	-	48	-	192	-	462
DEPARTMENT OF DEFENSE	3,025	72	34	-	2,638	-	281	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	15,464	-	14	-	8,480	596	3,772	1,841	761
DEPARTMENT OF THE INTERIOR	4,533	3,947	-	-	378	-	-	-	208
DEPARTMENT OF TRANSPORTATION	216	-	-	-	-	-	-	-	216
ATOMIC ENERGY COMMISSION	1,266	296	-	-	970	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	607	28	79	-	500	-	-	-	-
NATIONAL SCIENCE FOUNDATION	351	-	-	-	351	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	2,556	-	-	-	400	-	2,156	-	-
WASHINGTON	412,230	18,836	297,525	338	33,229	2,540	4,293	53,542	1,927
DEPARTMENT OF AGRICULTURE	5,586	4,018	8	-	1,559	-	-	-	1
DEPARTMENT OF COMMERCE	5,523	4,580	-	-	427	-	207	-	309
DEPARTMENT OF DEFENSE	183,059	3,363	174,135	-	2,327	2,540	225	-	469
DEPT. OF HEALTH, EDUC, & WELFARE	21,005	328	43	-	18,606	-	1,538	-	490
DEPARTMENT OF THE INTERIOR	3,855	3,133	30	-	211	-	156	-	325
DEPARTMENT OF TRANSPORTATION	118,429	1,676	116,215	-	150	-	55	-	333
ATOMIC ENERGY COMMISSION	60,235	115	3,661	338	2,553	-	266	53,302	-
NATIONAL AERONAUTICS & SPACE ADMIN	6,075	1,623	3,433	-	539	-	240	240	-
NATIONAL SCIENCE FOUNDATION	6,758	-	-	-	6,758	-	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	1,705	-	-	-	99	-	1,606	-	-
OUT AREAS	17,280	4,397	6,630	-	4,277	1,400	156	-	420
DEPARTMENT OF AGRICULTURE	2,474	970	-	-	1,504	-	-	-	-
DEPARTMENT OF COMMERCE	338	-	3	-	-	-	-	-	335
DEPARTMENT OF DEFENSE	7,873	2,176	5,677	-	20	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	1,917	244	-	-	1,505	-	116	-	52
DEPARTMENT OF THE INTERIOR	1,053	920	-	-	100	-	-	-	33
DEPARTMENT OF TRANSPORTATION	-	-	-	-	-	-	-	-	-
ATOMIC ENERGY COMMISSION	1,895	-	950	-	945	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	174	87	-	-	87	-	-	-	-
NATIONAL SCIENCE FOUNDATION	1,516	-	-	-	116	1,400	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	40	-	-	-	-	-	40	-	-
OFF ABROAD	56,826	43,344	7,154	-	455	1,600	143	4,130	-
DEPARTMENT OF AGRICULTURE	327	303	-	-	4	-	20	-	-
DEPARTMENT OF COMMERCE	313	-	-	-	313	-	-	-	-
DEPARTMENT OF DEFENSE	12,728	5,451	7,154	-	-	-	123	-	-
DEPT. OF HEALTH, EDUC, & WELFARE	301	301	-	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR	-	-	-	-	-	-	-	-	-
DEPARTMENT OF TRANSPORTATION	-	-	-	-	-	-	-	-	-
ATOMIC ENERGY COMMISSION	4,130	-	-	-	-	-	-	4,130	-
NATIONAL AERONAUTICS & SPACE ADMIN	37,289	37,289	-	-	-	-	-	-	-
NATIONAL SCIENCE FOUNDATION	1,738	-	-	-	138	1,600	-	-	-
OFFICE OF ECONOMIC OPPORTUNITY	-	-	-	-	-	-	-	-	-

TABLE C-86. FEDERAL OBLIGATIONS FOR R&D PLANT, BY GEOGRAPHIC DIVISION, STATE, AND PERFORMER SUPPORTED

FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

GEOGRAPHIC DIVISION AND STATE	TOTAL	FEDERAL INTRAMURAL	EXTRAMURAL						
			INDUSTRIAL FIRMS	FFRDCS ADMIN BY INDUSTRIAL FIRMS	UNIVER SITIES & COLLEGES	FFRDCS ADMIN BY UNIVS & COLLEGES	OTHER NONPROFIT INSTI-TUTIONS	FFRDCS ADMIN BY NONPROFIT INSTI-TUTIONS	OTHER
TOTAL, ALL STATES	519,614	162,158	40,535	60,866	56,114	169,016	4,740	24,100	2,085
NEW ENGLAND	14,970	6,145	3,034	-	5,038	573	5	-	175
CONNECTICUT	2,765	2,364	10	-	386	-	5	-	-
MAINE	122	-	-	-	10	-	-	-	112
MASS	10,677	2,908	3,024	-	4,109	573	-	-	63
NEW HAMP	42	33	-	-	9	-	-	-	-
RHODE ISL	1,326	840	-	-	486	-	-	-	-
VERMONT	38	-	-	-	38	-	-	-	-
M ATLANTIC	51,513	6,448	6,073	12,879	8,552	16,055	1,462	-	44
NEW JERSEY	5,631	3,284	1,687	-	593	67	-	-	-
NEW YORK	26,667	985	690	5,332	3,588	15,988	40	-	44
PENN	19,215	2,179	3,696	7,547	4,371	-	1,422	-	-
E N CENTRAL	119,876	14,076	131	894	16,819	85,556	2,400	-	-
ILLINOIS	94,739	69	-	-	6,714	85,556	2,400	-	-
INDIANA	418	-	-	-	418	-	-	-	-
MICHIGAN	3,807	3,382	-	-	425	-	-	-	-
OHIO	20,312	10,598	42	894	8,778	-	-	-	-
WISCONSIN	600	27	89	-	484	-	-	-	-
W N CENTRAL	9,263	1,492	2,035	-	1,316	915	600	2,905	-
IOWA	1,152	-	-	-	237	915	-	-	-
KANSAS	85	33	-	-	52	-	-	-	-
MINNESOTA	778	617	2	-	159	-	-	-	-
MISSOURI	4,247	-	-	-	742	-	600	2,905	-
NEBRASKA	858	815	-	-	43	-	-	-	-
N DAKOTA	66	27	-	-	39	-	-	-	-
S DAKOTA	2,077	-	2,033	-	44	-	-	-	-
S ATLANTIC	72,303	55,149	502	1,572	14,311	679	90	-	-
DELAWARE	12	4	-	-	8	-	-	-	-
DIST OF COL	6,425	2,328	-	-	4,067	-	30	-	-
FLORIDA	33,240	30,182	100	-	2,958	-	-	-	-
GEORGIA	2,026	808	-	-	1,218	-	-	-	-
MARYLAND	20,282	19,733	169	-	380	-	-	-	-
N CAROLINA	3,144	-	20	-	3,064	-	60	-	-
S CAROLINA	1,754	114	-	1,572	68	-	-	-	-
VIRGINIA	3,549	1,980	213	-	1,352	4	-	-	-
W VIRGINIA	1,871	-	-	-	1,196	675	-	-	-
E S CENTRAL	16,787	4,543	2,253	9,412	393	164	-	-	22
ALABAMA	1,785	1,730	-	-	55	-	-	-	-
KENTUCKY	813	639	60	-	114	-	-	-	-
MISSISSIPPI	812	748	-	-	42	-	-	-	22
TENNESSEE	13,377	1,426	2,193	9,412	182	164	-	-	-
W S CENTRAL	9,364	2,986	1,238	-	1,040	-	-	4,100	-
ARKANSAS	75	-	-	-	75	-	-	-	-
LOUISIANA	1,089	820	-	-	269	-	-	-	-
OKLAHOMA	127	39	-	-	88	-	-	-	-
TEXAS	8,073	2,127	1,238	-	608	-	-	4,100	-

WISCONSIN	600	27	89	-	484	-	-		
W N CENTRAL	9,263	1,492	2,035	-	1,316	915	600	2,905	-
IOWA	1,152	-	-	-	237	915	-	-	-
KANSAS	85	33	-	-	52	-	-	-	-
MINNESOTA	778	617	2	-	159	-	-	-	-
MISSOURI	4,247	-	-	-	742	-	600	2,905	-
NEBRASKA	858	815	-	-	43	-	-	-	-
N DAKOTA	66	27	-	-	39	-	-	-	-
S DAKOTA	2,077	-	2,033	-	44	-	-	-	-
S ATLANTIC	72,303	55,149	502	1,572	14,311	679	90	-	-
DELAWARE	12	4	-	-	8	-	-	-	-
DIST OF COL	6,425	2,328	-	-	4,067	-	30	-	-
FLORIDA	33,240	30,182	100	-	2,958	-	-	-	-
GEORGIA	2,026	808	-	-	1,218	-	-	-	-
MARYLAND	20,282	19,733	169	-	380	-	-	-	-
N CAROLINA	3,144	-	20	-	3,064	-	60	-	-
S CAROLINA	1,754	114	-	1,572	68	-	-	-	-
VIRGINIA	3,549	1,980	213	-	1,352	4	-	-	-
W VIRGINIA	1,871	-	-	-	1,196	675	-	-	-
E S CENTRAL	16,787	4,543	2,253	9,412	393	164	-	-	22
ALABAMA	1,785	1,730	-	-	55	-	-	-	-
KENTUCKY	813	639	60	-	114	-	-	-	-
MISSISSIPPI	812	748	-	-	42	-	-	-	22
TENNESSEE	13,377	1,426	2,193	9,412	182	164	-	-	-
W S CENTRAL	9,364	2,986	1,238	-	1,040	-	-	4,100	-
ARKANSAS	75	-	-	-	75	-	-	-	-
LOUISIANA	1,089	820	-	-	269	-	-	-	-
OKLAHOMA	127	39	-	-	88	-	-	-	-
TEXAS	8,073	2,127	1,238	-	608	-	-	4,100	-
MOUNTAIN	112,367	22,641	14,039	32,455	2,308	40,747	145	-	32
ARIZONA	1,633	1,574	3	-	10	46	-	-	-
COLORADO	5,212	4,508	4	-	487	213	-	-	-
IDAHO	23,043	121	640	13,825	309	8,116	-	-	32
MONTANA	48	24	-	-	24	-	-	-	-
NEVADA	17,223	[illegible]	12,661	4,110	66	95	-	-	-
NEW MEXICO	63,606	[illegible]	686	14,520	345	32,277	145	-	-
UTAH	974	490	45	-	439	-	-	-	-
WYOMING	628	-	-	-	628	-	-	-	-
PACIFIC	104,432	43,402	9,267	3,654	6,293	23,812	38	17,055	911
ALASKA	459	315	17	-	127	-	-	-	-
CALIFORNIA	85,928	39,884	8,844	3,654	4,126	23,812	18	5,220	370
HAWAII	506	445	-	-	61	-	-	-	-
OREGON	2,269	1,069	-	-	1,079	-	-	-	121
WASHINGTON	15,270	1,689	406	-	900	-	20	11,835	420
OUT AREAS	3,457	399	1,963	-	44	150	-	-	901
OFF ABROAD	5,282	4,877	-	-	-	365	-	40	-

NOTE- THE OBLIGATIONS OF THE TEN MAJOR R&D SUPPORTING AGENCIES INCLUDED IN THIS TABLE REPRESENT MORE THAN 98 PERCENT OF TOTAL FEDERAL R&D PLANT OBLIGATIONS IN FY 1970.

TABLE C-97. FEDERAL OBLIGATIONS FOR R&D PLANT, BY GEOGRAPHIC DIVISION, STATE, AND AGENCY, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

GEOGRAPHIC DIVISION AND STATE	TOTAL	DEPT. OF AGRI- CULTURE	DEPT. OF COMMERCE	DEPT. OF DEFENSE	DEPT. OF HEALTH, EDUCATION & WELFARE	DEPT. OF INTERIOR	DEPT. OF TRANS- PORTATION	ATOMIC ENERGY COMMISSION	NATIONAL AERO- NAUTICS & SPACE ADMIN	NATIONAL SCIENCE FOUNDATION	OFFICE OF ECONOMIC OPPORTUNITY
TOT, ALL ST	519,614	5,250	3,883	140,581	31,210	10,610	5,470	265,859	33,416	23,335	-
NEW ENGLAND	14,970	58	169	7,200	370	37	558	4,486	616	1,476	-
CONNECTICUT	2,765	10	-	1,806	-	-	558	245	-	146	-
MAINE	122	10	75	-	-	37	-	-	-	-	-
MASS	10,677	13	94	4,261	370	-	-	4,241	616	1,082	-
NEW HAMP	42	9	-	33	-	-	-	-	-	-	-
RHODE ISL	1,326	7	-	1,100	-	-	-	-	-	219	-
VERMONT	38	9	-	-	-	-	-	-	-	29	-
M ATLANTIC	51,513	87	44	7,100	-	3,576	452	34,129	405	5,720	-
NEW JERSEY	5,631	12	-	2,924	-	1,511	346	641	76	121	-
NEW YORK	26,667	29	44	2,044	-	543	-	22,165	160	1,682	-
PENN	19,215	46	-	2,132	-	1,522	106	11,323	169	3,917	-
E N CENTRAL	119,876	153	-	15,106	8,585	2,412	-	87,599	4,072	1,949	-
ILLINOIS	94,739	31	-	4,925	-	2,400	-	86,172	-	1,211	-
INDIANA	418	29	-	265	-	-	-	124	-	-	-
MICHIGAN	3,807	29	-	3,310	-	-	-	200	92	176	-
OHIO	20,312	34	-	6,606	8,585	12	-	953	3,980	142	-
WISCONSIN	600	30	-	-	-	-	-	150	-	420	-
W N CENTRAL	9,263	1,590	-	100	2,905	2,194	27	1,012	5	1,430	-
IOWA	1,152	30	-	-	-	140	-	915	-	67	-
KANSAS	85	52	-	-	-	-	-	21	-	12	-
MINNESOTA	778	613	-	40	-	-	27	76	5	17	-
MISSOURI	4,247	28	-	30	2,905	-	-	-	-	1,284	-
NEBRASKA	858	833	-	-	-	-	-	-	-	25	-
N DAKOTA	66	20	-	-	-	21	-	-	-	25	-
S DAKOTA	2,077	14	-	30	-	2,033	-	-	-	-	-
S ATLANTIC	72,303	1,120	894	46,373	10,527	455	187	1,709	7,055	4,003	-
DELAWARE	12	12	-	-	-	-	-	-	-	-	-
DIST OF COL	6,425	-	-	2,261	4,067	54	-	1	12	30	-
FLORIDA	33,240	63	100	25,394	2,376	158	-	8	4,584	557	-
GEORGIA	2,026	801	-	34	-	-	-	5	-	1,186	-
MARYLAND	20,282	136	794	17,553	202	43	85	108	1,234	127	-
N CAROLINA	3,144	42	-	150	2,631	20	-	-	-	301	-
S CAROLINA	1,754	23	-	-	-	-	-		-		-
VIRGINIA											

PENN	19,215	46	-	2,132	-	1,522	106	11,323	169	3,917	-
E N CENTRAL	119,876	153	-	15,106	8,585	2,412	-	87,599	4,072	1,949	-
ILLINOIS	94,739	31	-	4,925	-	2,400	-	86,172	-	1,211	-
INDIANA	418	29	-	265	-	-	-	124	-	-	-
MICHIGAN	3,807	29	-	3,310	-	-	-	200	92	176	-
OHIO	20,312	34	-	6,606	8,585	12	-	953	3,980	142	-
WISCONSIN	600	30	-	-	-	-	-	150	-	420	-
W N CENTRAL	9,263	1,590	-	100	2,905	2,194	27	1,012	5	1,430	-
IOWA	1,152	30	-	-	-	140	-	915	-	67	-
KANSAS	85	52	-	-	-	-	-	21	-	12	-
MINNESOTA	778	613	-	40	-	-	27	76	-	17	-
MISSOURI	4,247	28	-	30	2,905	-	-	-	5	1,284	-
NEBRASKA	858	833	-	-	-	-	-	-	-	25	-
N DAKOTA	66	20	-	-	-	21	-	-	-	25	-
S DAKOTA	2,077	14	-	30	-	2,033	-	-	-	-	-
S ATLANTIC	72,303	1,120	894	46,373	10,507	455	187	1,709	7,055	4,003	-
DELAWARE	12	12	-	-	-	-	-	-	-	-	-
DIST OF COL	6,425	-	-	2,261	4,067	54	-	1	12	30	-
FLORIDA	33,240	63	100	25,394	2,376	158	-	8	4,584	557	-
GEORGIA	2,026	801	-	34	-	-	-	5	-	1,186	-
MARYLAND	20,282	136	794	17,553	202	43	85	108	1,234	127	-
N CAROLINA	3,144	42	-	150	2,631	20	-	-	-	301	-
S CAROLINA	1,754	23	-	-	-	-	-	1,572	114	45	-
VIRGINIA	3,549	27	-	981	1,231	-	102	15	1,111	82	-
W VIRGINIA	1,871	16	-	-	-	180	-	-	-	1,675	-
E S CENTRAL	16,787	338	9	1,797	-	14	82	12,005	2,412	130	-
ALABAMA	1,785	25	-	146	-	-	82	-	1,502	30	-
KENTUCKY	813	29	-	77	-	-	-	60	562	85	-
MISSISSIPPI	812	253	9	174	-	13	-	-	348	15	-
TENNESSEE	13,377	31	-	1,400	-	1	-	11,945	-	-	-
W S CENTRAL	9,364	553	-	1,242	4,100	1,014	-	166	1,598	691	-
ARKANSAS	75	20	-	-	-	-	-	-	-	55	-
LOUISIANA	1,089	21	-	-	-	-	-	-	818	250	-
OKLAHOMA	127	26	-	-	-	-	-	-	31	70	-
TEXAS	8,073	486	-	1,242	4,100	1,014	-	166	749	316	-
MOUNTAIN	112,367	172	110	21,701	-	313	4,118	83,686	334	1,933	-
ARIZONA	1,633	65	-	1,519	-	3	-	-	-	46	-
COLORADO	5,212	25	78	81	-	66	4,118	29	152	663	-
IDAHO	23,043	12	32	-	-	29	-	22,561	112	297	-
MONTANA	48	35	-	-	-	-	-	-	-	13	-
NEVADA	17,223	7	-	3,334	-	-	-	13,803	50	29	-
NEW MEXICO	63,606	11	-	16,062	-	115	-	47,083	-	335	-
UTAH	974	9	-	705	-	100	-	140	20	-	-
WYOMING	628	8	-	-	-	-	-	70	-	550	-
PACIFIC	104,432	1,146	2,594	32,768	4,698	595	46	41,016	16,919	4,650	-
ALASKA	459	8	-	269	-	-	-	17	66	99	-
CALIFORNIA	85,928	31	370	31,598	4,698	290	46	28,731	16,853	3,311	-
HAWAII	506	8	350	95	-	-	-	3	-	50	-
OREGON	2,269	1,083	121	-	-	-	-	-	-	1,065	-
WASHINGTON	15,270	16	1,753	806	-	305	-	12,265	-	125	-
OUT AREAS	3,457	33	63	2,317	45	-	-	11	-	988	-
OFF ABROAD	5,282	-	-	4,877	-	-	-	40	-	365	-

NOTE- THE OBLIGATIONS OF THE TEN MAJOR R&D SUPPORTING AGENCIES INCLUDED IN THIS TABLE REPRESENT MORE THAN 98 PERCENT OF TOTAL FEDERAL R&D PLANT OBLIGATIONS IN FY 1970.

TABLE C-88. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT TO INTRAMURAL PERFORMERS FOR PERSONNEL COSTS, BY AGENCY, FISCAL YEAR 1970, 1971, 1972

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	ACTUAL, 1970			ESTIMATES					
				1971			1972		
	TOTAL	PERSONNEL COSTS	PERCENT	TOTAL	PERSONNEL COSTS	PERCENT	TOTAL	PERSONNEL COSTS	PERCENT
TOTAL, ALL AGENCIES....................	3,875,485	2,389,713	61.6	3,928,677	2,497,938	63.5	4,139,135	2,556,433	61.7
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	208,355	158,776	76.2	226,478	167,424	73.9	227,382	170,664	75.0
AGRICULTURAL RESEARCH SERVICE...........	148,673	111,080	74.7	162,651	116,709	71.7	163,734	120,055	73.3
COOPERATIVE STATE RESEARCH SERVICE.....	2,080	2,080	100.0	2,292	2,292	100.0	2,447	2,447	100.0
ECONOMIC RESEARCH SERVICE..............	14,683	12,040	81.9	15,488	12,391	80.0	15,228	12,183	80.0
FARMER COOPERATIVE SERVICE.............	865	727	84.0	870	731	84.0	933	783	83.9
FOREST SERVICE.........................	41,412	32,302	78.0	44,542	34,745	78.0	44,394	34,627	77.9
NATIONAL AGRICULTURAL LIBRARY..........	107	88	82.2	102	100	98.0	113	113	100.0
STATISTICAL REPORTING SERVICE..........	535	459	85.7	533	456	85.5	533	456	85.5
DEPARTMENT OF COMMERCE, TOTAL..........	88,163	64,226	72.8	110,704	76,644	69.2	130,636	89,044	68.1
BUREAU OF THE CENSUS...................	2,973	2,038	68.5	4,197	3,267	77.8	3,450	2,675	77.5
ECONOMIC DEVELOPMENT ADMINISTRATION....	1,387	1,129	81.3	1,566	1,256	80.2	1,576	1,252	79.4
MARITIME ADMINISTRATION................	521	41	7.8	900	42	4.6	1,045	55	5.2
NATIONAL BUREAU OF STANDARDS...........	28,491	22,447	78.7	30,581	22,363	73.1	33,260	24,230	72.8
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	50,892	35,435	69.6	66,254	44,718	67.4	81,222	54,267	66.8
OFFICE OF BUSINESS ECONOMICS...........	3,505	2,812	80.2	4,004	3,109	77.6	4,508	3,442	76.3
OFFICE OF TELECOMMUNICATIONS...........	-	-	-	2,642	1,411	53.4	5,000	2,630	52.6
PATENT OFFICE..........................	394	325	82.4	560	478	85.3	575	493	85.7
DEPARTMENT OF DEFENSE, TOTAL...........	1,995,579	1,240,557	62.1	1,983,288	1,257,252	63.3	2,139,848	1,259,354	58.8
DEPARTMENT OF THE ARMY.................	629,508	377,605	59.9	637,119	379,576	59.5	741,191	396,293	53.4
DEPARTMENT OF THE NAVY.................	708,506	456,309	64.4	728,841	470,886	64.6	771,129	467,656	60.6
DEPARTMENT OF THE AIR FORCE............	525,947	341,083	64.8	486,644	341,289	70.1	477,694	324,379	67.9
DEFENSE AGENCIES.......................	131,049	65,333	49.8	127,766	63,834	49.9	146,834	69,326	47.2
DEPARTMENTWIDE FUNDS...................	569	227	39.8	2,918	1,667	57.1	3,000	1,700	56.6
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	246,583	148,222	60.1	293,585	177,979	60.6	311,047	186,072	59.8
FOOD AND DRUG ADMINISTRATION...........	13,350	11,214	84.0	14,824	12,452	83.9	20,249	17,009	83.9
HEALTH SERVICES & MENTAL HEALTH ADMIN..	49,531	34,203	69.0	55,429	40,915	73.8	56,690	37,825	66.7
NATIONAL INSTITUTES OF HEALTH..........	165,577	93,791	56.6	204,249	115,670	56.6	214,264	121,406	56.6
OFFICE OF CHILD DEVELOPMENT............	100	80	80.0	275	215	78.1	660	495	75.0
OFFICE OF EDUCATION....................	4,930	3,892	78.9	4,787	3,546	74.0	5,319	4,127	77.5
SOCIAL AND REHABILITATION SERVICE......	1,048	840	80.1	1,067	855	80.1	1,032	825	79.9
SOCIAL SECURITY ADMINISTRATION.........	12,047	4,202	34.8	12,954	4,326	33.3	12,833	4,385	34.1
DEPARTMENT OF HOUSING & URBAN DEVELOP..	3,704	2,785	75.1	6,135	4,609	75.1	5,489	4,124	75.1
DEPARTMENT OF THE INTERIOR, TOTAL......	100,401	72,146	71.8	107,676	77,931	72.3	114,620	82,841	72.2
BONNEVILLE POWER ADMINISTRATION........	833	602	72.2	1,390	1,010	72.6	1,423	1,067	74.9
BUREAU OF LAND MANAGEMENT..............	372	298	80.1	431	340	78.8	472	380	80.5
BUREAU OF MINES........................	40,653	31,000	76.2	43,349	33,600	77.5	47,060	36,300	77.1
BUREAU OF OUTDOOR RECREATION...........	92	85	92.3	83	75	90.3	76	70	92.1
BUREAU OF RECLAMATION..................	2,835	1,701	60.0	3,511	2,106	59.9	3,931	2,359	60.0
BUREAU OF SPORT FISHERIES & WILDLIFE...	11,259	4,132	36.6	12,753	5,069	39.7	13,257	5,231	39.4
GEOLOGICAL SURVEY......................	40,001	30,640	76.5	41,599	31,905	76.6	43,678	33,500	76.6
OFFICE OF COAL RESEARCH................	362	310	85.6	200	180	90.0	200	180	90.0
OFFICE OF SALINE WATER.................	3,344	2,820	84.3	3,510	2,963	84.4	3,510	2,963	84.4
OFFICE OF THE SECRETARY................	-	-	-	45	45	100.0	90	90	100.0
OFFICE OF WATER RESOURCES RESEARCH.....	650	558	85.8	805	638	79.2	923	701	75.9
DEPARTMENT OF JUSTICE, TOTAL...........	1,039	922	88.7	1,045	892	85.3	2,402	1,751	72.8
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	25	25	100.0	39	8	20.5	63	13	20.6

TABLE C-88. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT TO INTRAMURAL PERFORMERS FOR PERSONNEL COSTS, BY AGENCY, FISCAL YEAR 1970, 1971, 1972

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	ACTUAL, 1970			ESTIMATES					
				1971			1972		
	TOTAL	PERSONNEL COSTS	PERCENT	TOTAL	PERSONNEL COSTS	PERCENT	TOTAL	PERSONNEL COSTS	PERCENT
DEPARTMENT OF LABOR, TOTAL............	9,460	7,152	75.6	10,873	8,239	75.7	11,019	8,245	74.8
BUREAU OF LABOR STATISTICS.............	3,815	3,129	82.0	3,767	3,070	81.4	3,769	3,070	81.4
LABOR-MANAGEMENT SERVICES ADMIN.........	290	251	86.5	720	581	80.6	812	645	79.4
MANPOWER ADMINISTRATION.................	3,139	2,981	94.9	3,836	3,645	95.0	3,905	3,709	94.9
WORKPLACE STANDARDS ADMINISTRATION.....	2,216	791	35.6	2,550	943	36.9	2,533	821	32.4
POSTAL SERVICE..........................	7,499	6,433	85.7	7,415	6,748	91.0	14,556	12,136	83.3
DEPARTMENT OF STATE, TOTAL.............	5,533	4,537	81.9	5,843	4,746	81.2	5,774	4,598	79.6
DEPARTMENTAL FUNDS......................	52	28	53.8	109	78	71.5	109	78	71.5
AGENCY FOR INTERNATIONAL DEVELOPMENT...	5,410	4,450	82.2	5,703	4,640	81.3	5,665	4,520	79.7
PEACE CORPS.............................	71	59	83.0	31	28	90.3	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	64,240	43,646	67.9	83,269	47,356	56.8	87,895	63,943	72.7
FEDERAL AVIATION ADMINISTRATION........	35,147	25,294	71.9	44,878	23,627	52.6	38,521	29,366	76.2
FEDERAL HIGHWAY ADMINISTRATION..........	5,838	5,546	94.9	4,944	4,697	95.0	5,787	5,498	95.0
FEDERAL RAILROAD ADMINISTRATION........	1,050	818	77.9	2,460	1,242	50.4	2,807	1,361	48.4
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,378	913	66.2	3,060	1,583	51.7	3,615	2,015	55.7
OFFICE OF THE SECRETARY.................	6,080	3,900	64.1	6,040	3,900	64.5	11,800	7,000	59.3
UNITED STATES COAST GUARD..............	14,731	7,162	48.6	15,710	7,365	46.8	18,763	13,421	71.5
URBAN MASS TRANSPORTATION ADMIN........	16	13	81.2	6,177	4,942	80.0	6,602	5,282	80.0
DEPARTMENT OF THE TREASURY, TOTAL......	610	462	75.7	945	570	60.3	908	633	69.7
BUREAU OF ENGRAVING AND PRINTING.......	610	462	75.7	945	570	60.3	908	633	69.7
OTHER AGENCIES									
ADVISORY COMM ON INTERGOVT RELATIONS...	553	442	79.9	477	358	75.0	487	341	70.0
ATOMIC ENERGY COMMISSION................	17,466	10,452	59.8	15,704	9,464	60.2	14,257	8,610	60.3
CIVIL AERONAUTICS BOARD.................	263	259	98.4	270	256	94.8	331	268	80.9
CIVIL SERVICE COMMISSION................	448	448	100.0	498	498	100.0	533	533	100.0
ENVIRONMENTAL PROTECTION AGENCY........	26,222	16,477	62.8	37,807	23,602	62.4	43,831	27,397	62.5
FEDERAL COMMUNICATIONS COMMISSION......	615	615	100.0	638	638	100.0	669	669	100.0
FEDERAL HOME LOAN BANK BOARD............	291	195	67.0	388	247	63.6	497	292	58.7
FEDERAL TRADE COMMISSION...............	388	388	100.0	467	467	100.0	460	460	100.0
GENERAL SERVICES ADMINISTRATION........	226	170	75.2	73	55	75.3	42	32	76.1
LIBRARY OF CONGRESS.....................	1,889	1,097	58.0	2,515	1,179	46.8	3,916	1,811	46.2
NATIONAL AERONAUTICS & SPACE ADMIN.....	988,048	529,443	53.5	907,987	535,961	59.0	887,152	530,916	59.8
NATIONAL SCIENCE FOUNDATION............	13,900	8,764	63.0	23,535	18,489	78.5	27,061	21,072	77.8
OFFICE OF ECONOMIC OPPORTUNITY.........	6,698	6,380	95.2	8,307	7,640	91.9	9,116	8,700	95.4
OFFICE OF EMERGENCY PREPAREDNESS.......	620	372	60.0	670	402	60.0	375	225	60.0
OFFICE OF SCIENCE AND TECHNOLOGY.......	1,858	1,112	59.8	1,980	1,186	59.8	2,163	1,294	59.9
SMALL BUSINESS ADMINISTRATION..........	10	10	100.0	-	-	-	10	10	100.0
SMITHSONIAN INSTITUTION................	16,634	12,748	76.6	18,842	13,534	71.8	23,985	15,089	62.9
TENNESSEE VALLEY AUTHORITY.............	8,029	6,182	76.9	9,192	7,078	77.0	10,070	7,754	77.0
US ARMS CONTROL & DISARMAMENT AGENCY...	2,736	1,735	63.4	1,994	1,364	68.4	2,236	1,496	66.9
UNITED STATES INFORMATION AGENCY.......	121	90	74.3	126	95	75.3	110	83	75.4
VETERANS ADMINISTRATION................	57,304	42,465	74.1	59,951	45,035	75.1	60,261	45,976	76.2

TABLE C-89. FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO INTRAMURAL PERFORMERS FOR PERSONNEL COSTS, BY AGENCY, FISCAL YEAR 1970, 1971, 1972

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	ACTUAL, 1970			ESTIMATES					
				1971			1972		
	TOTAL	PERSONNEL COSTS	PERCENT	TOTAL	PERSONNEL COSTS	PERCENT	TOTAL	PERSONNEL COSTS	PERCENT
TOTAL, ALL AGENCIES	658,284	392,349	59.6	669,135	415,939	62.1	704,806	441,777	62.6
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL	85,437	64,950	76.0	91,249	67,134	73.5	90,619	67,664	74.6
AGRICULTURAL RESEARCH SERVICE	66,858	50,097	74.9	71,250	51,236	71.9	71,067	52,104	73.3
COOPERATIVE STATE RESEARCH SERVICE	790	790	100.0	871	871	100.0	930	930	100.0
ECONOMIC RESEARCH SERVICE	4,259	3,492	81.9	4,492	3,594	80.0	4,416	3,533	80.0
FARMER COOPERATIVE SERVICE	221	186	84.1	236	198	83.8	236	198	83.8
FOREST SERVICE	13,264	10,346	78.0	14,360	11,201	78.0	13,930	10,865	77.9
STATISTICAL REPORTING SERVICE	45	39	86.6	40	34	85.0	40	34	85.0
DEPARTMENT OF COMMERCE, TOTAL	35,876	25,988	72.4	45,512	31,284	68.7	53,012	36,026	67.9
BUREAU OF THE CENSUS	243	184	75.7	344	239	69.4	321	237	73.8
NATIONAL BUREAU OF STANDARDS	13,982	11,016	78.7	14,591	10,670	73.1	14,880	10,840	72.8
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	18,146	11,976	65.9	24,415	16,114	66.0	29,772	19,650	66.0
OFFICE OF BUSINESS ECONOMICS	3,505	2,812	80.2	4,004	3,109	77.6	4,508	3,442	76.3
OFFICE OF TELECOMMUNICATIONS	-	-	-	2,158	1,152	53.3	3,531	1,857	52.5
DEPARTMENT OF DEFENSE, TOTAL	95,646	65,048	68.0	101,169	67,677	66.8	103,663	68,513	66.0
DEPARTMENT OF THE ARMY	28,291	21,546	76.1	28,020	21,291	75.9	27,287	21,093	77.3
DEPARTMENT OF THE NAVY	30,233	19,470	64.3	31,534	20,371	64.6	31,902	20,533	64.3
DEPARTMENT OF THE AIR FORCE	36,604	23,722	64.8	40,509	25,351	62.5	43,794	26,479	60.4
DEFENSE AGENCIES	518	310	59.8	1,106	664	60.0	680	408	60.0
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	113,661	66,953	58.9	134,089	78,591	58.6	160,275	98,496	61.4
HEALTH SERVICES & MENTAL HEALTH ADMIN.	18,177	12,663	69.6	18,429	12,860	69.7	19,014	13,264	69.7
NATIONAL INSTITUTES OF HEALTH	94,783	53,650	56.6	114,877	65,020	56.5	140,366	84,420	60.1
OFFICE OF EDUCATION	298	237	79.5	358	286	79.8	415	332	80.0
SOCIAL SECURITY ADMINISTRATION	403	403	100.0	425	425	100.0	480	480	100.0
DEPARTMENT OF THE INTERIOR, TOTAL	39,797	28,735	72.2	39,912	29,012	72.6	41,379	30,147	72.8
BUREAU OF MINES	5,727	4,400	76.8	5,457	4,200	76.9	6,186	4,800	77.5
BUREAU OF RECLAMATION	32	19	59.3	24	14	58.3	20	12	60.0
BUREAU OF SPORT FISHERIES & WILDLIFE	3,560	958	26.9	4,146	1,565	37.7	4,257	1,624	38.1
GEOLOGICAL SURVEY	30,324	23,228	76.5	30,099	23,085	76.6	30,704	23,549	76.6
OFFICE OF SALINE WATER	10	8	80.0	10	8	80.0	10	8	80.0
OFFICE OF WATER RESOURCES RESEARCH	144	122	84.7	176	140	79.5	202	154	76.2
DEPARTMENT OF LABOR, TOTAL	1,787	1,296	72.5	2,268	1,656	73.0	2,371	1,728	72.8
BUREAU OF LABOR STATISTICS	1,422	974	68.4	1,461	992	67.8	1,463	992	67.8
LABOR-MANAGEMENT SERVICES ADMIN.	290	251	86.5	720	581	80.6	812	645	79.4
MANPOWER ADMINISTRATION	75	71	94.6	87	83	95.4	96	91	94.7
DEPARTMENT OF TRANSPORTATION, TOTAL	12,343	6,440	52.1	12,648	6,822	53.9	13,276	10,028	75.5
FEDERAL HIGHWAY ADMINISTRATION	1,256	1,193	94.9	1,099	1,044	94.9	1,286	1,222	95.0
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.	5	5	100.0	5	5	100.0	5	5	100.0
UNITED STATES COAST GUARD	11,080	5,240	47.2	11,542	5,771	50.0	11,983	8,799	73.4
URBAN MASS TRANSPORTATION ADMIN.	2	2	100.0	2	2	100.0	2	2	100.0
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION	922	531	57.5	587	332	56.5	456	255	55.9
CIVIL SERVICE COMMISSION	83	83	100.0	106	106	100.0	113	113	100.0
ENVIRONMENTAL PROTECTION AGENCY	50	40	80.0	50	40	80.0	75	60	80.0
NATIONAL AERONAUTICS & SPACE ADMIN.	238,696	108,220	45.3	198,372	100,501	50.6	189,429	92,837	49.0
NATIONAL SCIENCE FOUNDATION	11,200	6,677	59.6	17,660	14,082	79.7	18,011	14,260	79.1
OFFICE OF ECONOMIC OPPORTUNITY	600	580	96.6	960	940	97.9	2,200	2,100	95.4
OFFICE OF SCIENCE AND TECHNOLOGY	372	221	59.4	396	236	59.5	432	257	59.4
SMITHSONIAN INSTITUTION	16,634	12,748	76.6	18,842	13,534	71.8	23,985	15,089	62.9
VETERANS ADMINISTRATION	5,180	3,839	74.1	5,315	3,992	75.1	5,510	4,204	76.2

TABLE C-90. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH TO INTRAMURAL PERFORMERS FOR PERSONNEL COSTS, BY AGENCY, FISCAL YEAR 1970, 1971, 1972

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	ACTUAL, 1970			ESTIMATES					
				1971			1972		
	TOTAL	PERSONNEL COSTS	PERCENT	TOTAL	PERSONNEL COSTS	PERCENT	TOTAL	PERSONNEL COSTS	PERCENT
TOTAL, ALL AGENCIES....................	1,374,509	856,028	62.2	1,432,859	904,567	63.1	1,518,531	954,435	62.8
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL.......	114,655	87,203	76.0	125,604	93,089	74.1	126,682	95,371	75.2
AGRICULTURAL RESEARCH SERVICE..........	74,617	55,207	73.9	82,908	59,171	71.3	83,727	61,228	73.1
COOPERATIVE STATE RESEARCH SERVICE.....	1,290	1,290	100.0	1,421	1,421	100.0	1,517	1,517	100.0
ECONOMIC RESEARCH SERVICE..............	10,424	8,548	82.0	10,996	8,797	80.0	10,812	8,650	80.0
FARMER COOPERATIVE SERVICE.............	644	541	84.0	634	533	84.0	697	585	83.9
FOREST SERVICE.........................	27,292	21,288	78.0	29,265	22,829	78.0	29,538	23,040	78.0
NATIONAL AGRICULTURAL LIBRARY..........	107	88	82.2	102	100	98.0	113	113	100.0
STATISTICAL REPORTING SERVICE..........	281	241	85.7	278	238	85.6	278	238	85.6
DEPARTMENT OF COMMERCE, TOTAL..........	40,301	29,160	72.3	52,361	36,321	69.3	62,542	42,623	68.1
BUREAU OF THE CENSUS...................	1,357	866	63.8	1,759	1,383	78.6	1,498	1,154	77.0
ECONOMIC DEVELOPMENT ADMINISTRATION....	524	451	86.0	664	555	83.5	666	555	83.3
MARITIME ADMINISTRATION................	515	35	6.7	888	30	3.3	845	45	5.3
NATIONAL BUREAU OF STANDARDS...........	12,294	9,686	78.7	13,497	9,870	73.1	14,887	10,845	72.8
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	25,327	17,882	70.6	34,614	23,835	68.8	42,707	28,847	67.5
OFFICE OF TELECOMMUNICATIONS...........	-	-	-	484	259	53.5	1,469	773	52.6
PATENT OFFICE..........................	284	240	84.5	455	389	85.4	470	404	85.9
DEPARTMENT OF DEFENSE, TOTAL...........	486,575	316,353	65.0	456,727	311,298	68.1	497,639	316,398	63.5
DEPARTMENT OF THE ARMY.................	184,532	122,890	66.5	156,692	122,468	78.1	180,708	123,729	68.4
DEPARTMENT OF THE NAVY.................	126,722	81,609	64.4	122,697	77,324	63.0	132,058	78,815	59.6
DEPARTMENT OF THE AIR FORCE............	95,179	72,620	76.2	96,457	72,539	75.2	102,600	73,900	72.0
DEFENSE AGENCIES.......................	79,573	39,007	49.0	80,463	38,800	48.2	81,773	39,754	48.6
DEPARTMENTWIDE FUNDS...................	569	227	39.8	418	167	39.9	500	200	40.0
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	122,047	76,295	62.5	147,543	91,055	61.7	137,861	78,269	56.7
FOOD AND DRUG ADMINISTRATION...........	13,350	11,214	84.0	14,824	12,452	83.9	20,249	17,009	83.9
HEALTH SERVICES & MENTAL HEALTH ADMIN..	24,940	20,122	80.6	28,974	22,849	78.8	29,607	19,085	64.4
NATIONAL INSTITUTES OF HEALTH..........	70,112	39,610	56.4	88,672	50,100	56.5	73,055	36,310	49.7
OFFICE OF CHILD DEVELOPMENT............	50	40	80.0	100	80	80.0	140	105	75.0
OFFICE OF EDUCATION....................	953	710	74.5	1,427	858	60.1	1,475	1,070	72.5
SOCIAL AND REHABILITATION SERVICE......	998	800	80.1	1,017	815	80.1	982	785	79.9
SOCIAL SECURITY ADMINISTRATION.........	11,644	3,799	32.6	12,529	3,901	31.1	12,353	3,905	31.6
DEPARTMENT OF HOUSING & URBAN DEVELOP..	50	45	90.0	50	45	90.0	50	45	90.0
DEPARTMENT OF THE INTERIOR, TOTAL......	45,923	32,854	71.5	51,953	37,414	72.0	53,082	37,822	71.2
BONNEVILLE POWER ADMINISTRATION........	134	78	58.2	137	70	51.0	98	73	74.4
BUREAU OF LAND MANAGEMENT..............	350	280	80.0	407	320	78.6	448	360	80.3
BUREAU OF MINES........................	26,213	20,000	76.2	28,899	22,500	77.8	27,655	21,300	77.0
BUREAU OF OUTDOOR RECREATION...........	92	85	92.3	83	75	90.3	76	70	92.1
BUREAU OF RECLAMATION..................	2,695	1,617	60.0	3,384	2,030	59.9	3,796	2,278	60.0
BUREAU OF SPORT FISHERIES & WILDLIFE...	5,732	2,528	44.1	6,581	2,828	42.9	6,946	2,935	42.2
GEOLOGICAL SURVEY......................	9,677	7,412	76.5	11,500	8,820	76.6	12,974	9,951	76.6
OFFICE OF COAL RESEARCH................	300	250	83.3	100	90	90.0	100	90	90.0
OFFICE OF SALINE WATER.................	224	168	75.0	200	150	75.0	200	150	75.0
OFFICE OF THE SECRETARY................	-	-	-	33	33	100.0	68	68	100.0
OFFICE OF WATER RESOURCES RESEARCH.....	506	436	86.1	629	498	79.1	721	547	75.8
DEPARTMENT OF JUSTICE, TOTAL...........	301	250	83.0	327	235	71.8	1,005	706	70.2
BUREAU OF NARCOTICS AND DANGEROUS DRUGS	25	25	100.0	39	8	20.5	63	13	20.6
LAW ENFORCEMENT ASSISTANCE ADMIN.......	276	225	81.5	288	227	78.8	942	693	73.5

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TABLE C-90. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH TO INTRAMURAL PERFORMERS FOR PERSONNEL COSTS, BY AGENCY, FISCAL YEAR 1970, 1971, 1972

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	ACTUAL, 1970			ESTIMATES					
				1971			1972		
	TOTAL	PERSONNEL COSTS	PERCENT	TOTAL	PERSONNEL COSTS	PERCENT	TOTAL	PERSONNEL COSTS	PERCENT
DEPARTMENT OF LABOR, TOTAL..............	4,652	3,048	65.5	5,071	3,281	64.7	5,061	3,165	62.5
BUREAU OF LABOR STATISTICS..............	1,144	1,030	90.0	1,154	1,039	90.0	1,154	1,039	90.0
MANPOWER ADMINISTRATION.................	1,292	1,227	94.9	1,367	1,299	95.0	1,374	1,305	94.9
WORKPLACE STANDARDS ADMINISTRATION.....	2,216	791	35.6	2,550	943	36.9	2,533	821	32.4
POSTAL SERVICE..........................	1,634	1,153	70.5	1,670	1,234	73.8	2,506	1,456	58.1
DEPARTMENT OF STATE, TOTAL..............	4,771	3,887	81.4	4,653	3,706	79.6	4,749	3,723	78.3
DEPARTMENTAL FUNDS......................	52	28	53.8	109	78	71.5	109	78	71.5
AGENCY FOR INTERNATIONAL DEVELOPMENT...	4,648	3,800	81.7	4,513	3,600	79.7	4,640	3,645	78.5
PEACE CORPS.............................	71	59	83.0	31	28	90.3	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	19,500	10,605	54.3	32,495	10,111	31.1	45,480	33,072	72.7
FEDERAL AVIATION ADMINISTRATION........	9,227	3,736	40.4	18,930	2,101	11.1	22,871	18,123	79.2
FEDERAL HIGHWAY ADMINISTRATION.........	3,607	3,427	95.0	2,730	2,594	95.0	3,196	3,036	94.9
FEDERAL RAILROAD ADMINISTRATION........	850	678	79.7	1,860	1,002	53.8	1,933	1,161	60.0
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	1,365	900	65.9	3,047	1,570	51.5	3,600	2,000	55.5
OFFICE OF THE SECRETARY................	2,260	900	39.8	2,240	900	40.1	8,000	4,000	50.0
UNITED STATES COAST GUARD..............	2,184	958	43.8	2,968	1,344	45.2	5,280	4,272	80.9
URBAN MASS TRANSPORTATION ADMIN........	7	6	85.7	750	600	80.0	600	480	80.0
DEPARTMENT OF THE TREASURY, TOTAL......	286	196	68.5	373	221	59.2	390	238	61.0
BUREAU OF ENGRAVING AND PRINTING.......	286	196	68.5	373	221	59.2	390	238	61.0
OTHER AGENCIES									
ADVISORY COMM ON INTERGOVT RELATIONS...	553	442	79.9	477	358	75.0	487	341	70.0
ATOMIC ENERGY COMMISSION................	3,852	1,958	50.8	4,118	2,119	51.4	4,214	2,176	51.6
CIVIL AERONAUTICS BOARD.................	263	259	98.4	270	256	94.8	331	268	80.9
CIVIL SERVICE COMMISSION................	196	196	100.0	221	221	100.0	237	237	100.0
ENVIRONMENTAL PROTECTION AGENCY.........	18,686	12,169	65.1	19,649	13,931	70.8	27,829	19,362	69.5
FEDERAL COMMUNICATIONS COMMISSION......	615	615	100.0	638	638	100.0	669	669	100.0
FEDERAL HOME LOAN BANK BOARD............	291	195	67.0	388	247	63.6	497	292	58.7
FEDERAL TRADE COMMISSION................	388	388	100.0	467	467	100.0	460	460	100.0
GENERAL SERVICES ADMINISTRATION........	198	149	75.2	65	49	75.3	20	15	75.0
LIBRARY OF CONGRESS.....................	925	624	67.4	1,006	655	65.1	1,175	849	72.2
NATIONAL AERONAUTICS & SPACE ADMIN.....	440,961	227,839	51.6	454,421	242,668	53.4	472,311	260,242	55.0
NATIONAL SCIENCE FOUNDATION............	1,500	992	66.1	2,862	1,990	69.5	3,050	2,102	68.9
OFFICE OF ECONOMIC OPPORTUNITY.........	3,898	3,700	94.9	5,054	4,600	91.0	5,194	5,000	96.2
OFFICE OF EMERGENCY PREPAREDNESS.......	620	372	60.0	670	402	60.0	375	225	60.0
OFFICE OF SCIENCE AND TECHNOLOGY.......	557	334	59.9	594	356	59.9	648	389	60.0
SMALL BUSINESS ADMINISTRATION..........	10	10	100.0	-	-	-	10	10	100.0
TENNESSEE VALLEY AUTHORITY.............	6,254	4,815	76.9	7,335	5,648	77.0	8,100	6,237	77.0
US ARMS CONTROL & DISARMAMENT AGENCY...	2,233	1,525	68.2	1,335	1,040	77.9	1,300	1,035	79.6
UNITED STATES INFORMATION AGENCY.......	100	75	75.0	100	75	75.0	100	75	75.0
VETERANS ADMINISTRATION................	51,714	38,322	74.1	54,362	40,837	75.1	54,477	41,563	76.2

TABLE C-91. FEDERAL OBLIGATIONS FOR DEVELOPMENT TO INTRAMURAL PERFORMERS FOR PERSONNEL COSTS, BY AGENCY, FISCAL YEAR 1970, 1971, 1972

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	ACTUAL, 1970			ESTIMATES					
				1971			1972		
	TOTAL	PERSONNEL COSTS	PERCENT	TOTAL	PERSONNEL COSTS	PERCENT	TOTAL	PERSONNEL COSTS	PERCENT
TOTAL, ALL AGENCIES	1,842,692	1,141,336	61.9	1,826,683	1,177,432	64.4	1,915,798	1,160,221	60.5
DEPARTMENTS									
DEPARTMENT OF AGRICULTURE, TOTAL	8,263	6,623	80.1	9,625	7,201	74.8	10,081	7,629	75.6
AGRICULTURAL RESEARCH SERVICE	7,198	5,776	80.2	8,493	6,302	74.2	8,940	6,723	75.2
FOREST SERVICE	856	668	78.0	917	715	77.9	926	722	77.9
STATISTICAL REPORTING SERVICE	209	179	85.6	215	184	85.5	215	184	85.5
DEPARTMENT OF COMMERCE, TOTAL	11,986	9,078	75.7	12,831	9,039	70.4	15,082	10,395	68.9
BUREAU OF THE CENSUS	1,373	988	71.9	2,094	1,645	78.5	1,631	1,284	78.7
ECONOMIC DEVELOPMENT ADMINISTRATION	863	677	78.4	902	701	77.7	910	697	76.5
MARITIME ADMINISTRATION	6	6	100.0	12	12	100.0	200	10	5.0
NATIONAL BUREAU OF STANDARDS	2,215	1,745	78.7	2,493	1,823	73.1	3,493	2,545	72.8
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	7,419	5,577	75.1	7,225	4,769	66.0	8,743	5,770	65.9
PATENT OFFICE	110	85	77.2	105	89	84.7	105	89	84.7
DEPARTMENT OF DEFENSE, TOTAL	1,413,358	859,156	60.7	1,425,392	878,277	61.6	1,538,546	874,443	56.8
DEPARTMENT OF THE ARMY	416,685	233,169	55.9	452,407	235,817	52.1	533,196	251,471	47.1
DEPARTMENT OF THE NAVY	551,551	355,230	64.4	574,610	373,191	64.9	607,169	368,308	60.6
DEPARTMENT OF THE AIR FORCE	394,164	244,741	62.0	349,678	243,399	69.6	331,300	224,000	67.6
DEFENSE AGENCIES	50,958	26,016	51.0	46,197	24,370	52.7	64,381	29,164	45.2
DEPARTMENTWIDE FUNDS	-	-	-	2,500	1,500	60.0	2,500	1,500	60.0
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	10,875	4,974	45.7	11,953	8,333	69.7	12,911	9,307	72.0
HEALTH SERVICES & MENTAL HEALTH ADMIN.	6,414	1,418	22.1	8,026	5,206	64.8	8,069	5,476	67.8
NATIONAL INSTITUTES OF HEALTH	682	531	77.8	700	550	78.5	843	676	80.1
OFFICE OF CHILD DEVELOPMENT	50	40	80.0	175	135	77.1	520	390	75.0
OFFICE OF EDUCATION	3,679	2,945	80.0	3,002	2,402	80.0	3,429	2,725	79.4
SOCIAL AND REHABILITATION SERVICE	50	40	80.0	50	40	80.0	50	40	80.0
DEPARTMENT OF HOUSING & URBAN DEVELOP.	3,654	2,740	74.9	6,085	4,564	75.0	5,439	4,079	74.9
DEPARTMENT OF THE INTERIOR, TOTAL	14,681	10,557	71.9	15,811	11,505	72.7	20,159	14,872	73.7
BONNEVILLE POWER ADMINISTRATION	699	524	74.9	1,253	940	75.0	1,325	994	75.0
BUREAU OF LAND MANAGEMENT	22	18	81.8	24	20	83.3	24	20	83.3
BUREAU OF MINES	8,713	6,600	75.7	8,993	6,900	76.7	13,219	10,200	77.1
BUREAU OF RECLAMATION	108	65	60.1	103	62	60.1	115	69	60.0
BUREAU OF SPORT FISHERIES & WILDLIFE	1,967	646	32.8	2,026	676	33.3	2,054	672	32.7
OFFICE OF COAL RESEARCH	62	60	96.7	100	90	90.0	100	90	90.0
OFFICE OF SALINE WATER	3,110	2,644	85.0	3,300	2,805	85.0	3,300	2,805	85.0
OFFICE OF THE SECRETARY	-	-	-	12	12	100.0	22	22	100.0
DEPARTMENT OF JUSTICE, TOTAL	738	672	91.0	718	657	91.5	1,397	1,045	74.8
BUREAU OF PRISONS	160	120	75.0	140	105	75.0	220	160	72.7
FEDERAL BUREAU OF INVESTIGATION	115	115	100.0	115	115	100.0	115	115	100.0
LAW ENFORCEMENT ASSISTANCE ADMIN.	463	437	94.3	463	437	94.3	1,062	770	72.5
DEPARTMENT OF LABOR, TOTAL	3,021	2,808	92.9	3,534	3,302	93.4	3,587	3,352	93.4
BUREAU OF LABOR STATISTICS	1,249	1,125	90.0	1,152	1,039	90.1	1,152	1,039	90.1
MANPOWER ADMINISTRATION	1,772	1,683	94.9	2,382	2,263	95.0	2,435	2,313	94.9
POSTAL SERVICE	5,865	5,280	90.0	5,745	5,514	95.9	12,050	10,680	88.6

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TABLE C-91. FEDERAL OBLIGATIONS FOR DEVELOPMENT TO INTRAMURAL PERFORMERS FOR PERSONNEL COSTS, BY AGENCY, FISCAL YEAR 1970, 1971, 1972

CONTINUED

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	ACTUAL, 1970			ESTIMATES					
				1971			1972		
	TOTAL	PERSONNEL COSTS	PERCENT	TOTAL	PERSONNEL COSTS	PERCENT	TOTAL	PERSONNEL COSTS	PERCENT
DEPARTMENT OF STATE, TOTAL.............	762	650	85.3	1,190	1,040	87.3	1,025	875	85.3
AGENCY FOR INTERNATIONAL DEVELOPMENT...	762	650	85.3	1,190	1,040	87.3	1,025	875	85.3
DEPARTMENT OF TRANSPORTATION, TOTAL....	32,397	26,601	82.1	38,126	30,423	79.7	29,139	20,843	71.5
FEDERAL AVIATION ADMINISTRATION........	25,920	21,558	83.1	25,978	21,526	82.8	15,650	11,243	71.8
FEDERAL HIGHWAY ADMINISTRATION.........	975	926	94.9	1,115	1,059	94.9	1,305	1,240	95.0
FEDERAL RAILROAD ADMINISTRATION........	200	140	70.0	600	240	40.0	874	200	22.8
NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..	8	8	100.0	8	8	100.0	10	10	100.0
OFFICE OF THE SECRETARY................	3,820	3,000	78.5	3,800	3,000	78.9	3,800	3,000	78.9
UNITED STATES COAST GUARD..............	1,467	964	65.7	1,200	250	20.8	1,500	350	23.3
URBAN MASS TRANSPORTATION ADMIN........	7	5	71.4	5,425	4,340	80.0	6,000	4,800	80.0
DEPARTMENT OF THE TREASURY, TOTAL......	324	266	82.0	572	349	61.0	518	395	76.2
BUREAU OF ENGRAVING AND PRINTING.......	324	266	82.0	572	349	61.0	518	395	76.2
OTHER AGENCIES									
ATOMIC ENERGY COMMISSION...............	12,692	7,963	62.7	10,999	7,013	63.7	9,587	6,179	64.4
CIVIL SERVICE COMMISSION...............	169	169	100.0	171	171	100.0	183	183	100.0
ENVIRONMENTAL PROTECTION AGENCY........	7,486	4,268	57.0	18,108	9,631	53.1	15,927	7,975	50.0
GENERAL SERVICES ADMINISTRATION........	28	21	75.0	8	6	75.0	22	17	77.2
LIBRARY OF CONGRESS....................	964	473	49.0	1,509	524	34.7	2,741	962	35.0
NATIONAL AERONAUTICS & SPACE ADMIN.....	308,391	193,389	62.7	255,194	192,792	75.5	225,412	177,837	78.8
NATIONAL SCIENCE FOUNDATION............	1,200	1,095	91.2	3,013	2,417	80.2	6,000	4,710	78.5
OFFICE OF ECONOMIC OPPORTUNITY.........	2,200	2,100	95.4	2,293	2,100	91.5	1,722	1,600	92.9
OFFICE OF SCIENCE AND TECHNOLOGY.......	929	557	59.9	990	594	60.0	1,080	648	60.0
TENNESSEE VALLEY AUTHORITY.............	1,775	1,367	77.0	1,857	1,430	77.0	1,970	1,517	77.0
US ARMS CONTROL & DISARMAMENT AGENCY...	503	210	41.7	659	324	49.1	936	461	49.2
UNITED STATES INFORMATION AGENCY.......	21	15	71.4	26	20	76.9	10	8	80.0
VETERANS ADMINISTRATION................	410	304	74.1	274	206	75.1	274	209	76.2

Table C-92. Federal expenditures for research, development, and R&D plant, by agency, fiscal years 1940–1972

[Millions of dollars]

Agency	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
Total, all agencies	74.1	197.9	280.3	602.4	1,377.2	1,590.7	917.8	899.9	854.8	1,082.0	1,082.8
Departments											
Department of Agriculture	29.1	28.3	29.9	30.7	32.1	33.7	36.8	39.2	42.4	50.5	53.0
Department of Commerce [a]	3.3	3.1	3.2	5.2	5.2	5.0	5.0	4.8	8.2	12.5	12.0
Department of Defense, Total	26.4	143.7	211.1	395.1	448.1	513.0	418.0	550.8	592.2	695.4	652.3
Department of the Army [b]	3.8	18.7	68.4	149.0	161.3	134.0	114.0	100.0	116.4	136.6	123.1
Department of the Navy [b]	13.9	24.6	58.9	130.5	176.6	243.0	183.0	293.8	287.5	332.9	310.8
Department of the Air Force [b]	8.7	100.4	83.8	115.6	110.2	136.0	121.0	157.0	188.3	225.9	218.4
Advanced Research Projects Agency [c]	----	----	----	----	----	----	----	----	----	----	----
Departmentwide Funds [c]	----	----	----	----	----	----	----	----	----	----	----
Defense Agencies [c]	----	----	----	----	----	----	----	----	----	----	----
Department of Health, Education, and Welfare [d]	2.8	3.0	3.2	3.2	3.3	3.4	3.5	10.1	22.8	27.9	39.6
Department of the Interior	7.9	9.5	13.5	17.0	20.7	18.0	17.0	20.3	31.4	38.2	32.1
Department of Transportation [a]	----	----	----	----	----	----	----	----	----	----	----
Other Agencies											
Atomic Energy Commission	----	----	----	----	----	----	----	37.7	107.5	196.1	221.4
Environmental Protection Agency	----	----	----	----	----	----	----	----	----	----	----
Federal Aviation Agency [a]	----	----	----	----	----	----	----	----	----	----	----
Manhattan Engineer District [e]	----	----	----	77.0	730.0	859.0	366.0	186.0	----	----	----
National Aeronautics and Space Administration [f]	2.2	2.6	5.0	9.8	18.4	24.1	23.7	35.2	37.5	48.7	54.5
National Science Foundation	----	----	----	----	----	----	----	----	----	----	----
Office of Economic Opportunity	----	----	----	----	----	----	----	----	----	----	----
Office of Scientific Research and Development	----	5.3	11.0	52.2	86.8	114.5	36.8	5.6	.9	----	----
Veterans Administration	----	----	----	----	----	----	----	----	----	----	----
All Other Agencies	2.4	2.4	3.4	12.2	32.6	20.0	11.0	10.2	11.8	12.8	17.7

Agency	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
Total, all agencies	1,300.5	1,816.2	3,101.0	3,147.9	3,308.3	3,446.0	4,461.9	4,990.6	5,806.4	7,744.2	9,287.0
Departments											
Department of Agriculture	52.4	57.1	54.9	55.4	72.0	87.7	97.0	111.8	124.7	131.4	147.7
Department of Commerce [a]	16.9	10.1	13.6	10.6	9.9	20.4	19.8	17.8	30.1	33.1	35.5
Department of Defense, Total	823.4	1,317.0	2,454.8	2,487.2	2,630.2	2,639.0	3,371.4	3,664.2	4,183.3	5,653.8	6,618.1
Department of the Army [b]	161.6	318.0	743.3	815.7	1,012.8	702.4	782.1	873.5	890.9	1,108.9	1,306.0
Department of the Navy [b]	363.8	476.0	678.3	664.7	591.9	635.8	784.9	854.1	1,034.7	1,300.6	1,631.0
Department of the Air Force [b]	297.9	523.0	1,033.2	1,006.8	982.2	1,278.9	1,780.0	1,894.0	2,134.5	2,978.0	3,440.6
Advanced Research Projects Agency [c]	----	----	----	----	----	----	----	3.0	80.9	226.3	206.6
Departmentwide Funds [c]	----	----	----	----	43.3	21.9	24.4	39.6	42.3	40.0	33.9
Defense Agencies [c]	----	----	----	----	----	----	----	----	----	----	----
Department of Health, Education, and Welfare [d]	53.4	64.1	65.2	62.5	70.2	86.2	143.5	180.3	252.8	324.2	374.1
Department of the Interior	32.1	32.8	35.2	39.1	31.9	35.7	42.3	48.9	72.2	65.3	75.1
Department of Transportation [a]	----	----	----	----	----	----	----	----	----	----	----
Other Agencies											
Atomic Energy Commission	242.6	249.6	378.1	383.1	385.4	474.0	656.5	804.2	877.1	985.9	1,111.1
Environmental Protection Agency	----	----	----	----	----	----	----	----	----	----	----
Federal Aviation Agency	----	----	----	----	----	----	----	4.2	27.6	41.2	52.9
Manhattan Engineer District [e]	----	----	----	----	----	----	----	----	----	----	----
National Aeronautics and Space Administration [f]	61.6	67.4	78.6	89.5	73.8	71.1	76.1	89.2	145.5	401.0	744.3
National Science Foundation	.1	.5	2.1	3.6	8.5	15.4	30.6	33.7	54.1	64.2	82.7
Office of Economic Opportunity	----	----	----	----	----	----	----	----	----	----	----
Office of Scientific Research and Development	----	----	----	----	----	----	----	----	----	----	----
Veterans Administration	----	3.3	4.6	5.1	5.3	6.1	9.4	12.8	16.8	18.6	23.1
All Other Agencies	18.2	14.3	13.9	11.8	21.1	10.4	15.3	23.5	22.2	25.4	22.6

See footnotes at end of table.

Table C-92. Federal expenditures for research, development, and R&D plant, by agency, fiscal years 1940–1972—Continued

[Millions of dollars]

Agency	1962	1963	1964	1965	1966	1967	1968	1969	1970	Estimates 1971	Estimates 1972
Total, all agencies	10,386.8	12,012.1	14,707.0	14,888.8	16,017.9	16,859.1	17,048.9	16,347.6	15,735.8	15,988.2	16,314.8
Departments											
Department of Agriculture	155.7	172.5	183.4	205.7	236.3	269.8	286.2	283.8	298.6	316.2	322.0
Department of Commerce [a]	47.5	70.4	84.5	85.8	71.2	80.5	81.6	78.4	127.9	144.5	163.0
Department of Defense, Total	6,812.0	6,848.8	7,517.0	6,727.6	6,734.6	7,680.1	8,163.6	7,868.4	7,587.9	7,726.8	7,912.8
Department of the Army [b]	1,243.5	1,421.2	1,413.6	1,428.9	1,485.2	1,734.0	1,539.5	1,609.8	1,771.6	1,767.1	1,893.6
Department of the Navy [b]	1,561.0	1,573.6	1,724.2	1,419.4	1,548.6	1,941.9	2,104.1	2,108.8	2,172.4	2,271.0	2,351.5
Department of the Air Force [b]	3,672.9	3,539.1	3,951.1	3,404.8	3,194.2	3,487.0	3,987.8	3,626.3	3,150.1	3,173.5	3,139.2
Advanced Research Projects Agency [c]	192.9										
Departmentwide Funds [c]	141.7	14.6	21.1	9.9	9.9	9.9	7.2	9.2	5.9	19.6	48.8
Defense Agencies [c]		300.4	406.9	464.7	496.7	507.3	525.0	514.2	488.0	495.7	479.6
Department of Health, Education, and Welfare [d]	512.1	632.4	793.4	737.9	879.4	1,075.0	1,283.1	1,220.0	1,261.3	1,390.4	1,538.0
Department of the Interior	86.7	102.7	102.0	118.8	149.3	166.7	195.1	204.2	159.8	193.6	208.7
Department of Transportation [a]					165.7	239.3	219.1	208.0	262.6	416.2	561.0
Other Agencies											
Atomic Energy Commission	1,284.3	1,335.6	1,505.0	1,520.0	1,461.9	1,466.9	1,594.3	1,654.0	1,616.0	1,618.9	1,523.0
Environmental Protection Agency									70.2	91.5	111.1
Federal Aviation Agency	53.7	74.7	74.0	96.4							
Manhattan Engineer District [e]											
National Aeronautics and Space Administration [f]	1,257.0	2,552.3	4,171.0	5,092.9	5,933.0	5,425.7	4,723.7	4,251.7	3,753.1	3,368.9	3,152.4
National Science Foundation	112.6	153.1	202.9	206.3	240.9	294.8	333.6	342.3	324.1	359.7	430.6
Office of Economic Opportunity				4.2	49.4	36.7	41.0	77.1	79.3	90.8	95.0
Office of Scientific Research and Development											
Veterans Administration	30.8	33.1	34.1	40.4	42.2	46.4	47.4	54.0	61.7	67.0	71.7
All Other Agencies	34.3	36.5	39.7	52.5	54.1	77.2	80.2	105.7	133.3	203.7	225.5

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[a] The Department of Transportation, as of 1966, includes the Bureau of Public Roads and the Office of Transportation Research and Development formerly in the Department of Commerce; the Federal Aviation Agency; and the U.S. Coast Guard formerly under the Treasury Department.

[b] Includes pay and allowances of military R&D personnel beginning in fiscal year 1953, and support from procurement appropriations of development, test, and evaluation, starting with fiscal year 1954.

[c] Starting with 1963, Defense Agencies include the Advanced Research Projects Agency (ARPA), and other agencies such as Defense Atomic Support Agency and Defense Communications Agency. With the exception of ARPA, these agencies were previously included in departmentwide funds. Starting with 1963, Departmentwide Funds include Military Assistance, Civil Defense, and Emergency Funds only.

[d] Federal Security Agency prior to fiscal year 1952.

[e] This agency, under the Department of War, is shown separately to identify funds for this atomic energy project from other R&D funds.

[f] National Advisory Committee for Aeronautics prior to fiscal year 1958.

Sources: National Science Foundation and Bureau of the Budget (prior to 1952).

Table C-93. Federal expenditures for research and development, by agency, fiscal years 1952-72

[Millions of dollars]

Agency	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Total, all agencies	1,548.2	2,825.6	2,884.6	3,100.1	3,231.9	4,118.9	4,648.4	5,459.3	7,300.4	8,747.9	9,831.6
Departments											
Department of Agriculture	56.9	54.8	54.9	68.9	82.7	95.5	108.9	117.7	120.6	141.3	151.2
Department of Commerce [a]	6.9	12.2	8.0	8.9	20.2	18.2	17.5	28.4	29.7	32.0	38.1
Department of Defense, Total	1,167.0	2,299.2	2,342.0	2,519.7	2,519.0	3,193.3	3,528.4	4,094.4	5,553.0	6,501.4	6,720.0
Department of the Army [b]	283.0	712.2	785.2	985.2	682.4	766.9	856.5	878.3	1,066.2	1,253.8	1,226.4
Department of the Navy [b]	461.0	642.0	634.7	581.3	625.8	767.3	820.2	1,003.1	1,277.0	1,604.5	1,537.5
Department of the Air Force [b]	423.0	945.0	922.1	909.9	1,188.9	1,634.7	1,809.1	2,092.7	2,958.2	3,420.6	3,632.9
Advanced Research Project Agency [c]	------	------	------	------	------	------	3.0	78.0	211.7	188.7	181.5
Departmentwide Funds [c]	------	------	------	43.3	21.9	24.4	39.6	42.3	40.0	33.9	141.7
Defense Agencies [c]	------	------	------	------	------	------	------	------	------	------	------
Department of Health, Education, and Welfare	47.9	47.7	53.3	66.0	83.4	137.0	166.8	227.2	291.8	343.5	476.0
Department of the Interior	29.8	31.9	36.0	31.4	35.2	42.2	48.7	69.1	63.1	71.2	80.3
Department of Transportation [a]	------	------	------	------	------	------	------	------	------	------	------
Other Agencies											
Atomic Energy Commission	168.8	309.9	323.4	327.3	410.8	528.0	644.0	699.8	761.7	850.2	1,029.2
Environmental Protection Agency	------	------	------	------	------	------	------	------	------	------	------
Federal Aviation Agency	------	------	------	------	------	------	4.2	24.1	38.2	48.4	46.2
National Aeronautics and Space Administration [d]	50.9	49.5	47.5	43.4	50.5	55.2	72.0	120.7	346.6	646.1	1,142.7
National Science Foundation	.5	2.1	3.6	8.3	13.9	27.0	29.4	45.3	57.6	71.3	92.1
Office of Economic Opportunity	------	------	------	------	------	------	------	------	------	------	------
Veterans Administration	3.3	4.6	5.1	5.3	6.1	7.3	10.0	12.9	14.6	22.1	27.4
All Other Agencies	14.2	13.8	10.9	21.0	10.3	15.2	18.6	19.7	23.5	20.4	28.4

Agency	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
									1971	1972
Total, all agencies	11,338.5	13,758.9	13,811.4	14,970.2	16,073.0	16,333.0	15,695.4	15,157.0	15,327.0	15,673.0
Departments										
Department of Agriculture	164.1	178.4	199.6	228.4	253.5	262.5	270.1	285.0	306.3	311.4
Department of Commerce [a]	48.4	53.4	58.1	52.6	68.7	75.4	75.1	122.9	137.9	157.4
Department of Defense, Total	6,793.7	7,432.9	6,627.8	6,680.1	7,606.5	7,990.1	7,660.5	7,447.1	7,563.6	7,758.7
Department of the Army [b]	1,406.2	1,394.8	1,408.7	1,473.1	1,709.4	1,495.5	1,577.3	1,753.5	1,720.7	1,855.6
Department of the Navy [b]	1,564.8	1,715.1	1,396.9	1,532.6	1,928.9	2,052.9	2,080.0	2,150.8	2,241.0	2,320.3
Department of the Air Force [b]	3,508.7	3,917.9	3,359.8	3,171.6	3,453.0	3,927.2	3,513.8	3,088.5	3,123.3	3,088.1
Advanced Research Project Agency [c]	------	------	------	------	------	------	------	------	------	------
Departmentwide Funds [c]	14.6	21.1	9.9	9.9	9.9	7.2	9.2	5.9	19.6	48.8
Defense Agencies [c]	299.4	384.0	452.4	492.9	505.4	507.3	480.0	448.4	459.1	446.0
Department of Health, Education, and Welfare	590.1	746.9	681.4	830.9	993.5	1,216.5	1,186.7	1,217.9	1,336.7	1,475.7
Department of the Interior	95.5	92.3	108.7	131.3	147.1	178.2	195.8	151.6	180.7	193.7
Department of Transportation [a]	------	------	------	157.7	230.5	212.3	203.2	258.9	403.6	526.8
Other Agencies										
Atomic Energy Commission	1,077.9	1,236.0	1,240.7	1,212.4	1,257.3	1,369.0	1,405.9	1,346.0	1,306.6	1,251.4
Environmental Protection Agency	------	------	------	------	------	------	------	68.1	89.0	104.2
Federal Aviation Agency	66.5	62.7	94.0	------	------	------	------	------	------	------
National Aeronautics and Space Administration [d]	2,327.0	3,733.2	4,562.0	5,360.6	5,137.1	4,597.6	4,186.4	3,696.5	3,318.4	3,109.4
National Science Foundation	110.6	153.8	149.7	175.7	224.3	266.7	280.0	292.9	330.4	403.0
Office of Economic Opportunity	------	------	4.2	49.4	36.7	41.0	77.1	79.3	90.8	95.0
Veterans Administration	29.9	32.3	36.6	38.4	41.3	44.1	49.8	58.0	61.2	61.9
All Other Agencies	34.8	37.0	48.6	52.7	76.5	79.6	104.8	132.8	201.8	224.4

[a] The Department of Transportation, as of 1966, includes the Bureau of Public Roads and the Office of Transportation Research and Development formerly in the Department of Commerce; the Federal Aviation Agency; and the U.S. Coast Guard formerly under the Treasury Department.

[b] Includes pay and allowances of military R&D personnel beginning in fiscal year 1953, and support from procurement appropriations of development, test, and evaluation, starting with fiscal year 1954.

[c] Starting with 1963, Defense Agencies include the Advanced Research Projects Agency (ARPA), and other agencies such as Defense Atomic Support Agency and Defense Communications Agency. With the exception of ARPA, these agencies were previously included in departmentwide funds. Starting with 1963, Departmentwide Funds include Military Assistance, Civil Defense, and Emergency Funds only.

[d] National Advisory Committee for Aeronautics prior to fiscal year 1958.

Table C-94. Federal expenditures for R&D plant, by agency, fiscal years 1952-72

[Millions of dollars]

Agency	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
Total, all agencies	268.0	275.4	263.3	208.2	214.1	342.9	342.2	347.1	443.8	539.1	555.2
Departments											
Department of Agriculture	.2	.2	.5	3.2	5.0	1.5	2.9	7.0	10.8	6.4	4.5
Department of Commerce [a]	1.2	1.4	2.6	1.0	.2	1.6	.3	1.7	3.4	3.4	9.5
Department of Defense, Total	150.0	155.6	145.2	110.5	120.0	178.1	135.8	88.9	100.7	116.7	92.0
Department of the Army [b]	35.0	31.1	30.5	27.6	20.0	15.2	17.0	12.6	42.7	52.3	17.1
Department of the Navy [b]	15.0	36.3	30.0	10.6	10.0	17.6	33.9	31.6	23.6	26.5	23.5
Department of the Air Force [b]	100.0	88.2	84.7	72.3	90.0	145.3	84.9	41.8	19.8	20.0	40.0
Advanced Research Project Agency [c]								2.9	14.6	17.9	11.4
Departmentwide Funds [c]											
Defense Agencies [c]											
Department of Health, Education, and Welfare	16.2	17.5	9.2	4.2	2.8	6.5	13.6	25.6	32.4	30.6	36.0
Department of the Interior	3.0	3.3	3.1	.5	.5	.1	.2	3.1	2.2	3.9	6.4
Department of Transportation [a]											
Other Agencies											
Atomic Energy Commission	80.8	68.2	59.7	58.1	63.2	128.5	160.2	177.3	224.2	260.9	255.2
Environmental Protection Agency											
Federal Aviation Agency								3.5	3.0	4.5	7.5
National Aeronautics and Space Administration [d]	16.5	29.1	42.0	30.4	20.6	20.8	17.2	24.8	54.4	98.2	114.3
National Science Foundation				.3	1.6	3.6	4.3	8.8	6.6	11.4	20.6
Veterans Administration						2.1	2.7	4.0	4.0	1.0	3.4
All Other Agencies	.1	.1	.9	.1	.1	.1	5.0	2.4	2.1	2.1	5.8

Agency	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
									1971	1972
Total, all agencies	673.6	948.1	1,077.4	1,047.8	786.1	715.9	652.2	578.9	661.1	641.8
Departments										
Department of Agriculture	8.4	5.0	6.1	7.9	16.2	23.7	13.7	13.6	9.9	10.7
Department of Commerce [a]	21.9	31.1	27.7	18.7	11.8	6.2	3.3	5.1	6.7	5.6
Department of Defense, Total	55.2	84.1	99.9	54.5	73.5	173.5	207.9	140.8	163.3	154.1
Department of the Army [b]	15.0	18.8	20.2	12.1	24.6	43.9	32.5	18.2	46.5	38.1
Department of the Navy [b]	8.8	9.1	22.5	16.0	13.0	51.2	28.8	21.6	30.0	31.3
Department of the Air Force [b]	30.4	33.2	45.0	22.6	34.1	60.6	112.5	61.5	50.2	51.1
Advanced Research Project Agency [c]										
Departmentwide Funds [c]										
Defense Agencies [c]	1.0	23.0	12.2	3.8	1.8	17.7	34.2	39.6	36.6	33.6
Department of Health, Education, and Welfare	42.2	46.6	56.6	48.6	81.6	66.6	33.3	43.3	53.7	62.2
Department of the Interior	7.2	9.7	10.1	18.0	19.7	16.9	8.4	8.3	12.8	14.9
Department of Transportation [a]				7.9	8.7	6.8	4.8	3.7	12.6	34.2
Other Agencies										
Atomic Energy Commission	257.7	269.1	279.4	249.5	209.6	225.3	248.1	270.0	312.3	271.6
Environmental Protection Agency								2.1	2.5	6.9
Federal Aviation Agency	8.2	11.2	2.4							
National Aeronautics and Space Administration [d]	225.3	437.8	530.9	572.4	288.6	126.1	65.3	56.6	50.6	43.0
National Science Foundation	42.5	49.1	56.6	65.2	70.5	66.9	62.3	31.2	29.3	27.6
Veterans Administration	3.2	1.7	3.8	3.7	5.1	3.3	4.2	3.7	5.8	9.8
All Other Agencies	1.8	2.7	3.9	1.4	.8	.6	.9	.5	1.6	1.2

[a] The Department of Transportation, as of 1966, includes the Bureau of Public Roads and the Office of Transportation Research and Development formerly in the Department of Commerce; the Federal Aviation Agency; and the U.S. Coast Guard formerly under the Treasury Department.

[b] Includes pay and allowances of military R&D personnel beginning in fiscal year 1953, and support from procurement appropriations of development, test, and evaluation, starting with fiscal year 1954.

[c] Starting with 1963, Defense Agencies include the Advanced Research Projects Agency (ARPA), and other agencies such as Defense Atomic Support Agency and Defense Communications Agency. With the exception of ARPA, these agencies were previously included in departmentwide funds.

Starting with 1963, Departmentwide Funds include Military Assistance, Civil Defense, and Emergency Funds only.

[d] National Advisory Committee for Aeronautics prior to fiscal year 1958.

Table C-95. Federal obligations for research, development, and R&D plant, by agency, fiscal years 1947–72

[Millions of dollars]

Agency	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Total, all agencies	690.9	867.6	1,105.1	1,175.3	1,811.9	2,194.5	3,361.4	3,039.0	2,744.7	3,266.9	4,389.2	4,906.0	7,122.6
Departments													
Department of Agriculture	40.2	46.4	53.9	57.7	55.2	55.7	56.6	67.2	73.3	83.6	102.8	113.0	138.6
Department of Commerce [a]	6.4	9.8	11.9	22.7	12.3	14.1	11.2	8.3	15.9	18.4	19.3	18.6	30.1
Department of Defense, Total	503.3	485.8	651.9	635.6	1,278.0	1,706.6	2,732.8	2,416.4	2,084.2	2,430.6	3,250.0	3,480.3	5,236.8
Department of the Army [b]	112.4	97.7	119.2	120.9	317.1	535.9	930.7	796.2	443.5	420.0	544.5	615.3	1,186.8
Department of the Navy [b]	269.2	247.3	313.9	272.9	489.6	608.1	697.0	625.4	573.3	713.3	856.7	887.9	1,381.1
Department of the Air Force [b]	121.7	140.8	218.8	241.8	471.3	562.6	1,105.1	994.8	1,045.7	1,252.8	1,811.9	1,903.6	2,461.4
Advanced Research Projects Agency [c]	----	----	----	----	----	----	----	----	----	----	----	15.5	171.8
Departmentwide Funds [c]	----	----	----	----	----	----	----	----	21.7	44.5	36.9	58.0	35.6
Defense Agencies [c]	----	----	----	----	----	----	----	----	----	----	----	----	----
Department of Health, Education, and Welfare [d]	18.8	27.1	39.9	65.3	53.0	52.0	58.7	62.0	70.9	88.9	177.9	217.9	278.7
Department of the Interior	16.9	28.0	35.6	31.4	32.2	36.0	34.4	38.7	32.6	36.6	45.3	51.9	63.7
Department of Transportation [a]	----	----	----	----	----	----	----	----	----	----	----	----	----
Other Agencies													
Atomic Energy Commission	64.6	212.5	246.9	284.2	278.5	228.9	363.3	367.9	372.9	505.1	644.6	828.6	925.2
Environmental Protection Agency	----	----	----	----	----	----	----	----	----	----	----	----	----
Federal Aviation Agency	----	----	----	----	----	----	----	----	----	----	----	18.4	35.1
National Aeronautics and Space Administration [e]	29.9	44.4	50.4	62.7	84.4	81.7	78.6	56.9	64.5	65.7	83.4	97.3	299.7
National Science Foundation	----	----	----	----	.1	.9	2.3	4.6	10.3	17.4	37.8	41.5	75.2
Office of Economic Opportunity	----	----	----	----	----	----	----	----	----	----	----	----	----
Veterans Administration	1.4	3.1	4.3	3.8	5.1	3.9	5.1	5.3	5.6	6.5	10.1	12.6	17.1
All Other Agencies	9.4	10.5	10.3	11.9	13.1	14.7	18.4	11.6	14.6	14.1	18.1	26.0	22.5

Agency	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
												1971	1972
Total, all agencies	8,080.0	9,607.1	11,069.1	13,663.0	15,323.9	15,745.9	16,178.8	17,149.4	16,525.3	16,306.2	15,854.3	16,046.3	17,249.8
Departments													
Department of Agriculture	129.1	145.6	166.1	174.8	191.4	233.7	256.7	260.9	271.9	270.8	286.4	311.7	317.7
Department of Commerce [a]	33.4	46.8	70.9	80.9	98.6	63.5	66.4	78.9	88.1	75.3	125.5	166.4	185.3
Department of Defense, Total	5,825.3	6,687.9	6,816.5	7,372.8	7,352.5	6,865.0	7,099.0	8,135.9	7,907.7	7,890.0	7,500.9	7,582.0	8,492.4
Department of the Army [b]	1,182.8	1,153.5	1,224.6	1,311.6	1,389.3	1,478.3	1,615.0	1,703.3	1,593.9	1,666.5	1,687.0	1,729.3	2,108.7
Department of the Navy [b]	1,557.4	1,564.6	1,556.6	1,609.5	1,640.0	1,462.2	1,613.3	2,122.5	2,078.4	2,159.7	2,276.1	2,273.4	2,553.0
Department of the Air Force [b]	2,833.5	3,622.2	3,619.8	3,988.9	3,822.6	3,382.0	3,373.3	3,819.9	3,724.5	3,604.2	3,049.1	3,075.3	3,265.4
Advanced Research Projects Agency [c]	212.4	222.4	209.1	----	----	----	----	----	----	----	----	----	----
Departmentwide Funds [c]	39.2	125.2	206.5	11.1	11.8	11.3	10.0	10.6	7.3	5.0	4.1	53.6	53.7
Defense Agencies [c]	----	----	----	451.7	488.8	531.2	487.5	479.5	503.5	454.6	484.6	450.5	511.7
Department of Health, Education, and Welfare [d]	358.6	466.2	617.4	715.9	847.7	970.5	1,142.7	1,207.2	1,298.5	1,350.2	1,252.2	1,504.3	1,658.5
Department of the Interior	66.7	79.1	89.4	105.9	114.3	127.4	162.6	202.7	217.5	221.8	168.5	199.1	216.6
Department of Transportation [a]	----	----	----	----	----	----	181.5	292.6	179.8	233.6	322.8	456.7	525.8
Other Agencies													
Atomic Energy Commission	988.2	1,063.5	1,316.0	1,398.6	1,478.6	1,539.7	1,441.6	1,484.9	1,534.3	1,708.5	1,611.9	1,660.0	1,494.3
Environmental Protection Agency	----	----	----	----	----	----	----	----	----	----	90.5	121.0	166.7
Federal Aviation Agency	52.9	52.8	74.6	90.6	73.7	71.7	----	----	----	----	----	----	----
National Aeronautics and Space Administration [e]	486.9	905.1	1,684.2	3,434.1	4,842.2	5,481.9	5,327.4	4,987.8	4,494.4	4,018.1	3,833.4	3,272.7	3,244.8
National Science Foundation	87.6	106.3	169.6	218.3	238.0	275.4	323.1	327.9	350.3	300.7	312.3	366.6	513.2
Office of Economic Opportunity	----	----	----	----	----	14.9	64.0	44.2	44.1	70.6	123.4	115.6	100.0
Veterans Administration	19.1	23.2	30.8	33.1	34.3	47.3	46.0	45.9	48.0	54.3	61.2	76.6	63.2
All Other Agencies	32.2	30.4	33.6	37.9	52.6	55.1	67.8	80.5	90.7	112.3	165.3	214.1	271.3

[a] The Department of Transportation, as of 1966, includes the Bureau of Public Roads and the Office of Transportation Research and Development formerly in the Department of Commerce; the Federal Aviation Agency; and the U.S. Coast Guard formerly under the Treasury Department.

[b] Includes pay and allowances of military R&D personnel beginning in fiscal year 1953, and support from procurement appropriations of development, test, and evaluation, starting with fiscal year 1954.

[c] Starting with 1963, Defense Agencies include the Advanced Research Projects Agency (ARPA), and other agencies such as Defense Atomic Support Agency and Defense Communications Agency. With the exception of ARPA, these agencies were previously included in departmentwide funds.

Starting with 1963, Departmentwide Funds include Military Assistance, Civil Defense, and Emergency Funds only.

[d] Federal Security Agency prior to fiscal year 1952.

[e] National Advisory Committee for Aeronautics prior to fiscal year 1958.

Sources: National Science Foundation and the Bureau of the Budget (prior to 1952).

Table C-96. Federal obligations for research and development, by agency, fiscal years 1947–72

[Millions of dollars]

Agency	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Total, all agencies	619.5	776.5	937.7	972.6	1,481.9	1,887.3	3,106.0	2,875.0	2,532.8	2,988.2	3,932.0	4,569.7	6,693.5
Departments													
Department of Agriculture	40.0	45.7	53.2	56.9	55.1	55.3	56.0	59.3	72.2	83.0	99.8	110.2	120.7
Department of Commerce[a]	5.7	8.9	10.9	22.4	11.0	10.3	10.9	7.8	15.0	18.2	17.7	18.3	25.6
Department of Defense, Total	469.3	485.8	626.1	599.7	1,125.9	1,508.5	2,577.2	2,320.0	1,945.1	2,268.6	2,985.6	3,403.3	5,161.6
Department of the Army[b]	104.3	97.7	114.7	119.0	307.1	458.8	899.6	763.3	419.3	408.0	500.6	603.3	1,174.2
Department of the Navy[b]	252.3	247.3	298.0	257.6	450.2	551.1	660.7	615.3	564.8	673.3	804.2	867.9	1,349.5
Department of the Air Force[b]	112.7	140.8	213.5	223.1	368.6	498.6	1,016.9	941.4	939.3	1,142.8	1,643.9	1,858.6	2,440.0
Advanced Research Projects Agency[c]												15.5	162.3
Departmentwide Funds[c]									21.7	44.5	36.9	58.0	35.6
Defense Agencies[c]													
Department of Health, Education, and Welfare[d]	10.6	24.3	25.2	34.2	37.9	43.6	49.9	58.2	68.0	86.0	144.2	184.9	242.8
Department of the Interior	16.9	20.3	30.2	28.7	30.4	30.7	32.1	37.7	32.4	36.1	45.2	51.1	60.6
Department of Transportation[a]													
Other Agencies													
Atomic Energy Commission	39.9	145.4	140.0	172.2	157.9	168.9	309.9	323.4	327.3	410.7	528.0	644.0	699.8
Environmental Protection Agency													
Federal Aviation Agency[a]												16.3	27.3
National Aeronautics and Space Administration[e]	26.7	33.0	38.3	42.8	45.4	50.5	48.4	47.3	43.0	49.5	55.3	77.1	261.7
National Science Foundation					.1	.9	2.3	4.6	9.7	16.0	30.6	33.6	60.4
Office of Economic Opportunity													
Veterans Administration	1.4	3.1	4.3	3.8	5.1	3.9	5.1	5.3	5.6	6.5	7.7	10.1	12.8
All Other Agencies	8.9	10.0	9.6	11.8	13.0	14.7	14.1	11.3	14.5	13.6	17.9	21.0	20.2

Agency	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
												1971	1972
Total, all agencies	7,551.7	9,058.6	10,289.9	12,494.7	14,225.4	14,614.3	15,320.4	16,529.3	15,921.4	15,637.2	15,329.8	15,387.2	16,661.5
Departments													
Department of Agriculture	125.8	143.4	157.2	168.0	189.0	224.6	234.9	252.6	253.5	260.1	281.2	302.8	314.0
Department of Commerce[a]	31.4	32.3	40.1	52.2	53.8	61.3	55.2	74.8	83.9	72.1	121.6	157.9	181.7
Department of Defense, Total	5,711.5	6,574.0	6,722.9	7,285.7	7,261.9	6,796.5	7,023.6	8,049.2	7,709.3	7,696.3	7,360.4	7,420.2	8,332.0
Department of the Army[b]	1,117.0	1,117.9	1,203.5	1,297.4	1,376.9	1,459.5	1,585.4	1,661.3	1,563.4	1,643.8	1,659.8	1,691.1	2,071.4
Department of the Navy[b]	1,535.5	1,539.0	1,539.1	1,597.3	1,621.2	1,449.5	1,601.7	2,108.9	2,024.8	2,124.2	2,257.9	2,236.9	2,515.3
Department of the Air Force[b]	2,815.5	3,588.9	3,569.8	3,944.7	3,784.0	3,351.0	3,342.3	3,794.3	3,621.7	3,498.5	2,990.0	3,024.6	3,209.0
Advanced Research Projects Agency[c]	204.4	203.1	204.1										
Departmentwide Funds[c]	39.2	125.2	206.5	11.1	11.8	11.3	10.0	10.6	7.3	5.0	4.1	53.6	53.7
Defense Agencies[c]				435.2	467.9	525.2	484.2	474.0	492.0	424.6	448.6	414.0	482.6
Department of Health, Education, and Welfare[d]	319.8	428.5	576.9	656.2	776.9	869.4	1,014.4	1,146.6	1,251.8	1,297.4	1,221.0	1,479.9	1,635.4
Department of the Interior	64.0	73.3	85.6	92.1	106.4	113.2	143.2	170.4	190.6	207.6	157.9	185.1	204.3
Department of Transportation[a]							171.7	283.6	171.7	228.0	317.3	436.7	483.2
Other Agencies													
Atomic Energy Commission	761.7	850.2	1,029.2	1,077.9	1,236.0	1,240.7	1,212.4	1,257.3	1,369.0	1,405.9	1,346.0	1,306.6	1,251.4
Environmental Protection Agency											88.5	116.2	144.4
Federal Aviation Agency[a]	47.9	48.2	66.2	83.5	62.8	64.4							
National Aeronautics and Space Administration[e]	369.3	776.9	1,439.2	2,857.4	4,286.6	4,951.5	5,050.0	4,867.0	4,429.4	3,963.3	3,799.9	3,247.7	3,188.5
National Science Foundation	74.7	84.0	113.9	154.1	170.2	187.2	243.7	262.4	283.5	273.8	289.0	345.0	494.3
Office of Economic Opportunity						14.9	64.0	44.2	44.1	70.6	123.4	115.6	100.0
Veterans Administration	15.1	22.0	27.5	29.9	33.7	37.4	40.1	40.9	44.7	50.2	58.6	61.6	61.9
All Other Agencies	30.6	25.7	31.2	37.6	48.0	53.4	67.3	80.2	89.9	111.9	165.0	211.9	270.4

[a] The Department of Transportation, as of 1966, includes the Bureau of Public Roads and the Office of Transportation Research and Development formerly in the Department of Commerce; the Federal Aviation Agency; and the U.S. Coast Guard formerly under the Treasury Department.

[b] Includes pay and allowances of military R&D personnel beginning in fiscal year 1953, and support from procurement appropriations of development, test, and evaluation, starting with fiscal year 1954.

[c] Starting with 1963, Defense Agencies include the Advanced Research Projects Agency (ARPA), and other agencies such as Defense Atomic Support Agency and Defense Communications Agency. With the exception of ARPA, these agencies were previously included in departmentwide funds. Starting with 1963, Departmentwide Funds include Military Assistance, Civil Defense, and Emergency Funds only.

[d] Federal Security Agency prior to fiscal year 1952.

[e] National Advisory Committee for Aeronautics prior to fiscal year 1958.

Sources: National Science Foundation and the Bureau of the Budget (prior to 1952).

Table C-97. Federal obligations for R&D plant, by agency, fiscal years 1947–72

[Millions of dollars]

Agency	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Total, all agencies	71.4	91.1	167.4	202.7	330.0	307.2	255.4	164.0	211.9	278.7	457.2	336.3	429.1
Departments													
Department of Agriculture	.2	.7	.7	.8	.1	.4	.6	7.9	1.1	.6	3.0	2.8	17.9
Department of Commerce[a]	.7	.9	1.0	.3	1.3	3.8	.3	.5	.9	.2	1.6	.4	4.5
Department of Defense, Total	34.0		25.8	35.9	152.1	198.1	155.6	96.4	139.1	162.0	264.4	77.0	75.1
Department of the Army	8.1		4.5	1.9	10.0	77.1	31.1	32.9	24.2	12.0	43.9	12.0	12.6
Department of the Navy	16.9		15.9	15.3	39.4	57.0	36.3	10.1	8.5	40.0	52.5	20.0	31.6
Department of the Air Force	9.0		5.3	18.7	102.7	64.0	88.2	53.4	106.4	110.0	168.0	45.0	21.4
Advanced Research Projects Agency[b]													9.5
Defense Agencies[b]													
Department of Health, Education, and Welfare[c]	8.2	2.8	14.7	31.1	15.1	8.4	8.8	3.8	2.8	3.0	33.7	33.0	35.9
Department of the Interior		7.7	5.4	2.7	1.8	5.2	2.3	1.0	.1	.5	.1	.8	3.1
Department of Transportation[a]													
Other Agencies													
Atomic Energy Commission	24.7	67.1	106.9	112.0	120.6	60.0	53.4	44.5	45.6	94.3	116.6	184.6	225.4
Environmental Protection Agency													
Federal Aviation Agency[a]												2.1	7.8
National Aeronautics and Space Administration[d]	3.2	11.4	12.1	19.9	39.0	31.2	30.2	9.6	21.5	16.2	28.1	20.3	38.0
National Science Foundation									.7	1.4	7.1	7.9	14.8
Veterans Administration											2.4	2.6	4.3
All Other Agencies	.5	.5	.7	.1	.1		4.3	.3	.1	.5	.2	5.0	2.3

Agency	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
												1971	1972
Total, all agencies	528.3	548.5	779.1	1,168.3	1,098.5	1,131.6	858.3	620.1	603.8	669.0	524.4	659.1	588.3
Departments													
Department of Agriculture	3.4	2.2	9.0	6.8	2.4	9.1	21.8	8.2	18.3	10.7	5.3	8.9	3.7
Department of Commerce[a]	2.0	14.5	30.8	28.7	44.8	2.2	11.2	4.1	4.2	3.2	3.9	8.5	3.6
Department of Defense, Total	113.7	113.9	93.6	87.2	90.6	68.5	75.4	86.7	198.3	193.8	140.6	161.8	160.4
Department of the Army	65.8	35.6	21.1	14.2	12.3	18.8	29.6	42.0	30.5	22.7	27.2	38.1	37.3
Department of the Navy	21.9	25.6	17.5	12.3	18.8	12.7	11.6	13.6	53.6	35.5	18.2	36.5	37.7
Department of the Air Force	18.0	33.3	50.0	44.2	38.6	31.0	30.9	25.6	102.8	105.6	59.2	50.6	56.4
Advanced Research Projects Agency[b]	8.0	19.3	5.1										
Defense Agencies[b]				16.5	20.9	6.0	3.3	5.5	11.5	30.0	36.0	36.5	29.1
Department of Health, Education, and Welfare[c]	38.8	37.7	40.5	59.7	70.8	101.2	128.3	60.6	46.7	52.8	31.2	24.4	23.1
Department of the Interior	2.7	5.8	3.8	13.7	7.9	14.2	19.4	32.3	26.9	14.2	10.6	14.0	12.3
Department of Transportation[a]							9.8	9.0	8.1	5.6	5.5	19.5	42.6
Other Agencies													
Atomic Energy Commission	226.6	213.3	286.8	320.7	242.6	299.1	229.3	227.6	165.3	302.5	265.9	353.4	243.0
Environmental Protection Agency											2.0	4.9	22.3
Federal Aviation Agency[a]	5.0	4.6	8.4	7.2	10.9	7.3							
National Aeronautics and Space Administration[d]	117.7	128.2	245.0	576.7	555.7	530.4	277.4	120.8	65.0	54.8	33.4	25.0	56.3
National Science Foundation	12.8	22.3	55.7	64.1	67.8	88.2	79.4	65.4	66.9	26.9	23.3	21.6	18.9
Veterans Administration	4.0	1.2	3.4	3.2	.5	9.9	5.9	5.0	3.3	4.1	2.6	15.0	1.3
All Other Agencies	1.5	4.7	2.2	.3	4.6	1.7	.5	.3	.8	.4	.1	2.1	.8

[a] The Department of Transportation, as of 1966, includes the Bureau of Public Roads and the Office of Transportation Research and Development formerly in the Department of Commerce; the Federal Aviation Agency; and the U.S. Coast Guard formerly under the Treasury Department.

[b] Starting with 1963, Defense Agencies include the Advanced Research Projects Agency and other agencies such as Defense Atomic Support Agency and Defense Communications Agency.

[c] Federal Security Agency prior to fiscal year 1952.

[d] National Advisory Committee for Aeronautics prior to fiscal year 1958.

Table C-98. Federal obligations for research and development, by character of work and R&D plant, fiscal years 1956–72

[Millions of dollars]

Fiscal years	Total	Research		Develop-ment	R&D plant
		Basic	Applied		
1956	3,267	206	646	2,136	279
1957	4,389	262	662	3,007	457
1958	4,906	335	744	3,491	336
1959	7,123	517	886	5,291	429
1960	8,080	610	1,331	5,611	528
1961	9,607	825	1,796	6,438	549
1962	11,069	1,106	2,166	7,017	779
1963	13,663	1,389	2,652	8,454	1,168
1964	15,324	1,567	2,898	9,761	1,099
1965	15,746	1,690	3,164	9,760	1,132
1966	16,179	1,844	3,427	10,050	858
1967	17,149	2,015	3,258	11,256	620
1968	16,525	2,072	3,293	10,557	604
1969	16,306	2,094	3,145	10,398	669
1970	15,854	2,062	3,540	9,728	524
1971 (estimated)	16,046	2,165	3,830	9,392	659
1972 (estimated)	17,250	2,399	4,244	10,018	588

Table C-99. Federal obligations for total research, by selected agency, fiscal years 1956–72

[Millions of dollars]

Agency	1956	1957	1958	1959	1960	1961	1962
Total	852	925	1,079	1,403	1,941	2,620	3,273
Department of Agriculture	83	95	105	116	121	138	150
Department of Commerce	8	11	13	19	23	27	29
Department of Defense[a]	482	445	489	523	861	1,173	1,311
Department of Health, Education, and Welfare	83	142	182	240	317	427	574
Department of the Interior	34	40	41	51	56	65	76
Department of Transportation							
Atomic Energy Commission	87	99	131	170	199	220	247
Environmental Protection Agency							
National Aeronautics and Space Administration[b]	43	47	66	201	264	453	714
National Science Foundation	16	30	33	54	68	77	104
Veterans Administration	6	8	9	12	14	21	27
All others	11	7	9	16	17	19	40

Agency	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
									1971	1972
Total	4,041	4,464	4,854	5,271	5,273	5,365	5,239	5,602	5,995	6,644
Department of Agriculture	160	182	218	228	237	239	251	272	293	303
Department of Commerce	36	39	44	41	51	56	56	94	128	144
Department of Defense[a]	1,605	1,672	1,751	1,849	1,591	1,577	1,412	1,557	1,479	1,634
Department of Health, Education, and Welfare	653	772	862	966	1,082	1,147	1,174	1,129	1,362	1,490
Department of the Interior	76	90	98	121	143	152	164	122	135	144
Department of Transportation				18	45	56	68	88	111	184
Atomic Energy Commission	281	308	334	371	392	402	417	433	423	411
Environmental Protection Agency								53	61	79
National Aeronautics and Space Administration[b]	1,005	1,177	1,290	1,358	1,379	1,356	1,296	1,410	1,478	1,562
National Science Foundation	141	156	172	224	241	257	258	275	327	470
Veterans Administration	29	33	37	39	40	44	50	58	61	61
All others	54	35	48	56	72	79	93	111	137	162

[a] Includes pay and allowances of military R&D personnel and support from the procurement and operation and maintenance appropriations.

[b] National Advisory Committee for Aeronautics prior to 1958.

Table C-100. Federal obligations for basic research, by selected agency, fiscal years 1952–72

[Millions of dollars]

Agency	1952	1953	1954	1955	1956	1957	1958	1959	1960
Total	162	154	148	162	206	262	335	517	610
Department of Agriculture	7	7	8	12	15	19	24	29	34
Department of Defense [a]	72	65	52	53	78	84	111	137	168
Department of Health, Education, and Welfare	15	15	17	21	26	38	50	75	103
Atomic Energy Commission	34	35	40	42	45	55	72	87	104
National Aeronautics and Space Administration [b]	18	16	14	12	13	16	26	107	97
National Science Foundation	1	2	5	10	15	30	33	54	68
All others	14	13	12	12	14	20	19	28	35

Agency	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
											1971	1972
Total	825	1,106	1,389	1,567	1,690	1,844	2,015	2,072	2,094	2,062	2,165	2,399
Department of Agriculture	41	50	56	68	90	94	100	100	107	116	123	128
Department of Defense [a]	173	204	231	241	263	262	284	263	276	247	243	245
Department of Health, Education, and Welfare	137	190	236	274	303	326	372	397	371	388	452	488
Atomic Energy Commission	167	192	219	238	258	281	302	282	285	287	278	266
National Aeronautics and Space Administration [b]	190	316	447	524	528	559	603	656	678	637	626	688
National Science Foundation	77	104	141	155	171	223	239	252	248	245	285	400
All others	39	50	59	66	77	98	115	122	129	142	158	184

[a] Includes pay and allowances of military R&D personnel and support from the procurement and operation and maintenance appropriations starting with fiscal year 1964 data.

[b] National Advisory Committee for Aeronautics prior to 1958.

Table C-101. Federal obligations for applied research, by selected agency, fiscal years 1956–72

[Millions of dollars]

Agency	1956	1957	1958	1959	1960	1961	1962
Total	646	662	744	886	1,331	1,796	2,166
Department of Agriculture	68	76	81	87	87	97	101
Department of Commerce	5	7	8	12	14	15	13
Department of Defense [a]	404	361	378	386	693	1,000	1,107
Department of Health, Education, and Welfare	57	104	133	165	214	291	384
Department of the Interior	25	25	29	34	36	41	50
Department of Transportation	-	-	-	-	-	-	-
Atomic Energy Commission	42	44	59	83	95	53	55
Environmental Protection Agency	-	-	-	-	-	-	-
National Aeronautics and Space Administration [b]	29	31	41	95	166	263	398
National Science Foundation	1	-	-	-	-	-	-
Veterans Administration	6	7	7	9	11	18	24
All others	9	7	8	16	14	18	34

Agency	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
									1971	1972
Total	2,652	2,898	3,164	3,427	3,258	3,293	3,145	3,540	3,830	4,244
Department of Agriculture	104	114	128	134	137	140	145	156	170	176
Department of Commerce	15	16	19	19	27	30	29	55	78	86
Department of Defense [a]	1,374	1,431	1,488	1,587	1,307	1,313	1,135	1,310	1,236	1,388
Department of Health, Education, and Welfare	416	497	559	640	710	750	803	741	910	1,002
Department of the Interior	47	57	57	70	91	102	109	72	84	91
Department of Transportation	-	-	-	12	33	40	51	67	90	161
Atomic Energy Commission	62	71	76	90	90	120	132	146	145	145
Environmental Protection Agency	-	-	-	-	-	-	-	48	56	70
National Aeronautics and Space Administration [b]	558	653	762	799	775	701	618	773	852	874
National Science Foundation	-	1	1	2	3	6	11	30	42	70
Veterans Administration	26	30	33	35	35	38	43	53	55	55
All others	49	28	41	40	50	53	69	89	112	126

[a] Includes pay and allowances of military R&D personnel and support from the procurement and operation and maintenance appropriations.

[b] National Advisory Committee for Aeronautics prior to 1958.

Table C-102. Federal obligations for development, by selected agency, fiscal years 1956–72

[Millions of dollars]

Agency	1956	1957	1958	1959	1960	1961	1962
Total	2,136	3,007	3,491	5,291	5,611	6,438	7,017
Department of Defense [a]	1,786	2,540	2,914	4,638	4,850	5,401	5,411
Atomic Energy Commission	324	429	513	530	563	630	783
National Aeronautics and Space Administration [b]	7	9	11	61	105	324	725
All others	19	29	53	62	93	83	98

Agency	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
									1971	1972
Total	8,454	9,751	9,760	10,050	11,256	10,557	10,398	9,728	9,392	10,018
Department of Defense [a]	5,680	5,590	5,045	5,174	6,458	6,132	6,284	5,804	5,941	6,698
Atomic Energy Commission	797	928	907	842	866	967	989	913	883	840
National Aeronautics and Space Administration [b]	1,852	3,109	3,662	3,692	3,488	3,073	2,667	2,390	1,770	1,627
All others	125	134	146	342	444	385	458	621	799	854

[a] Includes pay and allowances of military R&D personnel and support from the procurement and operation and maintenance appropriations.

[b] National Advisory Committee for Aeronautics prior to 1958.

Table C-103. Federal obligations for research and development, by performer, fiscal years 1955–72

[Millions of dollars]

Performer	1955	1956	1957	1958	1959	1960	1961	1962
Total	2,533	2,988	3,932	4,570	6,694	7,552	9,059	10,290
Federal intramural [a]	905	1,041	1,220	1,374	1,640	1,726	1,874	2,098
Industrial firms [b]	1,304	1,579	2,245	2,607	4,246	4,834	5,890	6,565
Universities and colleges	144	176	224	288	367	459	585	755
FFRDC's administered by universities	143	146	168	209	271	323	410	510
Other nonprofit institutions [b]	34	40	62	77	106	136	223	289
All other performers	3	7	13	15	64	74	77	73

Performer	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
									1971	1972
Total	12,495	14,225	14,614	15,320	16,529	15,921	15,637	15,330	15,387	16,662
Federal intramural [a]	2,279	2,838	3,093	3,222	3,396	3,493	3,498	3,876	3,929	4,139
Industrial firms [b]	8,291	9,136	9,058	9,384	10,262	9,460	9,125	8,381	8,197	9,002
Universities and colleges	900	1,077	1,194	1,350	1,455	1,490	1,536	1,473	1,617	1,826
FFRDC's administered by universities	546	587	609	643	666	714	722	750	762	778
Other nonprofit institutions [b]	396	486	550	591	624	619	609	712	679	695
All other performers	84	101	111	130	127	145	147	139	204	222

[a] Federal intramural activities cover costs associated with the administration of intramural and extramural programs by Federal personnel as well as actual intramural performance.

[b] Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

Table C-104. Federal obligations for total research, by performer, fiscal years 1963–72

[Millions of dollars]

Performer	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
									1971	1972
Total	4,041	4,464	4,854	5,271	5,273	5,365	5,239	5,602	5,995	6,644
Federal intramural [a]	1,029	1,292	1,454	1,493	1,574	1,711	1,772	2,033	2,102	2,223
Industrial firms [b]	1,511	1,479	1,534	1,739	1,506	1,422	1,246	1,367	1,477	1,749
Universities and colleges	856	990	1,117	1,251	1,348	1,385	1,409	1,352	1,471	1,669
FFRDC's administered by universities	325	348	385	399	427	417	394	417	428	436
Other nonprofit institutions [b]	239	273	275	281	316	306	299	313	348	381
All other performers	81	83	89	107	101	124	119	120	169	186

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[a] Federal intramural activities cover costs associated with the administration of intramural and extramural programs by Federal personnel as well as actual intramural performance.

[b] Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

Table C-105. Federal obligations for basic research, by performer, fiscal years 1958–72

[Millions of dollars]

Performer	1958	1959	1960	1961	1962	1963
Total	335	517	610	825	1,106	1,389
Federal intramural [a]	125	173	160	206	251	299
Industrial firms [b]	25	72	93	149	236	322
Universities and colleges	127	186	244	293	381	479
FFRDC's administered by universities	34	51	63	111	153	170
Other nonprofit institutions [b]	20	28	37	46	59	86
All other performers	3	8	11	19	26	33

Performer	1964	1965	1966	1967	1968	1969	1970	Estimates	
								1971	1972
Total	1,567	1,690	1,844	2,015	2,072	2,094	2,062	2,165	2,399
Federal intramural [a]	363	424	449	478	512	577	658	669	705
Industrial firms [b]	336	299	325	366	389	399	320	351	434
Universities and colleges	564	637	728	784	786	766	718	744	843
FFRDC's administered by universities	177	196	213	249	254	255	267	283	286
Other nonprofit institutions [b]	90	96	98	108	101	73	63	69	76
All other performers	35	38	33	30	29	25	35	49	55

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[a] Federal intramural activities cover costs associated with the administration of intramural and extramural programs by Federal personnel as well as actual intramural performance.

[b] Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

Table C-106. Federal obligations for applied research, by performer, fiscal years 1963–72

[Millions of dollars]

Performer	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
									1971	1972
Total	2,652	2,898	3,164	3,427	3,258	3,293	3,145	3,540	3,830	4,244
Federal intramural [a]	730	928	1,029	1,045	1,095	1,199	1,195	1,375	1,433	1,519
Industrial firms [b]	1,189	1,143	1,235	1,414	1,140	1,033	848	1,047	1,126	1,315
Universities and colleges	377	425	480	523	565	599	643	633	727	826
FFRDC's administered by universities	155	171	189	187	179	163	139	150	145	150
Other nonprofit institutions [b]	153	182	180	183	208	205	226	250	280	305
All other performers	48	48	51	74	71	95	95	85	120	131

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[a] Federal intramural activities cover costs associated with the administration of intramural and extramural programs by Federal personnel as well as actual intramural performance.

[b] Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

Table C-107. Federal obligations for development, by performer, fiscal years 1963–72

[Millions of dollars]

Performer	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
									1971	1972
Total	8,454	9,761	9,760	10,050	11,256	10,557	10,398	9,728	9,392	10,018
Federal intramural [a]	1,250	1,546	1,639	1,728	1,822	1,782	1,726	1,843	1,827	1,916
Industrial firms [b]	6,780	7,657	7,524	7,645	8,756	8,038	7,878	7,014	6,720	7,252
Universities and colleges	44	87	77	99	106	105	127	121	146	158
FFRDC's administered by universities	221	239	224	244	239	297	328	332	334	342
Other nonprofit institutions [b]	157	213	274	310	307	314	310	398	331	314
All other performers	3	18	22	23	25	21	28	19	35	36

[a] Federal intramural activities cover costs associated with the administration of intramural and extramural programs by Federal personnel as well as actual intramural performance.

[b] Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

Table C-108. Federal obligations for total research, by field of science, fiscal years 1956–72

[Millions of dollars]

Field of science	1956	1957	1958	1959	1960	1961	1962
Total, all fields	852	925	1,079	1,403	1,941	2,620	3,273
Life sciences	208	292	342	417	511	629	810
Psychology	(a)	(a)	(a)	24	38	51	57
Physical sciences [b]	246	263	334	464	608	860	1,029
Environmental sciences [b]							
Mathematics	11	11	14	18	25	40	64
Engineering	357	322	350	415	690	864	1,059
Social sciences	30	36	40	31	35	45	63
Other sciences	(a)	(a)	(a)	33	33	132	190

Field of science	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
									1971	1972
Total, all fields	4,041	4,464	4,854	5,271	5,273	5,365	5,239	5,602	5,995	6,644
Life sciences	922	1,045	1,167	1,301	1,451	1,537	1,501	1,533	1,735	1,945
Psychology	72	95	103	100	108	98	103	113	125	140
Physical sciences [b]	1,339	1,602	1,705	1,830	1,074	1,131	1,169	1,010	1,025	1,086
Environmental sciences [b]					670	663	551	587	632	702
Mathematics	87	93	105	123	130	119	116	102	104	112
Engineering	1,445	1,450	1,576	1,677	1,555	1,569	1,499	1,968	2,014	2,198
Social sciences	80	102	127	166	189	195	220	216	273	311
Other sciences	97	77	70	74	95	53	80	72	86	149

[a] Not available.

[b] Physical sciences and environmental sciences not separately identified prior to 1967.

Table C-109. Federal obligations for basic research, by field of science, fiscal years 1956–72

[Millions of dollars]

Field of science	1956	1957	1958	1959	1960	1961	1962
Total, all fields	206	262	335	517	610	825	1,106
Life sciences	59	84	99	135	172	238	313
Psychology	([a])	([a])	([a])	9	17	21	28
Physical sciences[b]	120	147	192	291	319	443	604
Environmental sciences[b]							
Mathematics	6	7	11	14	18	21	26
Engineering	17	19	25	58	76	82	116
Social sciences	4	6	9	5	8	11	18
Other sciences	([a])	([a])	([a])	4	([c])	8	2

Field of science	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
									1971	1972
Total, all fields	1,389	1,567	1,690	1,844	2,015	2,072	2,094	2,062	2,165	2,399
Life sciences	380	424	487	552	612	612	569	576	631	735
Psychology	36	47	58	53	60	55	55	57	60	66
Physical sciences[b]	767	874	902	962	713	731	819	704	726	730
Environmental sciences[b]					321	351	319	352	362	419
Mathematics	42	52	57	60	65	67	57	59	53	58
Engineering	137	135	147	168	184	191	191	243	240	248
Social sciences	25	34	37	44	57	62	72	66	81	100
Other sciences	2	2	2	4	4	3	11	4	12	43

[a] Not available.

[b] Physical sciences and environmental sciences not separately identified prior to 1967.

[c] Less than $500,000.

Table C-110. Federal obligations for applied research, by field of science, fiscal years 1956–72

[Millions of dollars]

Field of science	1956	1957	1958	1959	1960	1961	1962
Total, all fields	646	662	744	886	1,331	1,796	2,166
Life sciences	149	208	243	282	340	391	498
Psychology	([a])	([a])	([a])	15	21	30	29
Physical sciences[b]	126	116	142	173	289	417	425
Environmental sciences[b]							
Mathematics	5	4	3	5	7	19	38
Engineering	340	304	325	357	614	781	943
Social sciences	26	30	31	26	27	34	45
Other sciences	([a])	([a])	([a])	28	33	124	189

Field of science	1963	1964	1965	1966	1967	1968	1969	1970	Estimates	
									1971	1972
Total, all fields	2,652	2,898	3,164	3,427	3,258	3,293	3,145	3,540	3,830	4,245
Life sciences	542	621	680	749	839	925	932	957	1,104	1,210
Psychology	35	48	46	47	48	43	49	56	65	74
Physical sciences[b]	572	728	803	868	361	400	350	306	300	356
Environmental sciences[b]					349	312	232	234	271	283
Mathematics	45	41	48	62	65	53	59	43	51	54
Engineering	1,308	1,316	1,429	1,510	1,371	1,378	1,307	1,725	1,774	1,950
Social sciences	55	68	90	121	132	134	148	150	192	211
Other sciences	95	75	68	69	92	48	69	68	74	107

[a] Not available.

[b] Physical sciences and environmental sciences not separately identified prior to 1967.

STATIS

Appendix D

statistical tables, part II

federal funds for scientific and technical information

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NOTES

- Source of data is the National Science Foundation.
- Estimates for 1972 are based on **The Budget, FY 1972**, as submitted to Congress, and do not reflect subsequent appropriation and apportionment actions.
- Obligations reported for extramural performance are limited to contracts or grants with private individuals or organizations outside the Government that have as their primary purpose the support of scientific and technical information. Excluded are obligations for information efforts that supplement or support work under R&D contracts or grants.
- Defense Agencies include the Advanced Research Projects Agency, the Defense Atomic Support Agency, the Defense Supply Agency, the Defense Intelligence Agency, and the Defense Communications Agency.
- Obligations for category 4, Research and Development in Information Sciences, Documentation and Information Systems, Techniques and Devices, are also reported under R&D obligations in part I.
- In addition to the amounts reported for ca gory 4, the Department of Defense also ported under R&D obligations in part I $11 million of its total for the three other inforr tion activities for 1970; $109.8 million 1971; and $108.8 for 1972.
- In addition to the amounts reported for ca gory 4 the National Institutes of Health of Department of Health, Education, and Welfa also reported under R&D obligations in par $11.3 million of its total for the three ot information activities for 1970; $11.6 mill for 1971; and $11.6 million for 1972.
- The National Oceanic and Atmospheric Adm istration (NOAA) was established in fiscal y 1971 within the Department of Commer NOAA includes Commerce's Environmental ence Services Administration (ESSA), which its largest component. It also has incorpora from Interior the Bureau of Commercial Fi eries, the marine sport fish activities of Fish and Wildlife Service, and the Marine M erals Technology Center of the Bureau Mines. NOAA has taken over the Army Co of Engineers' Great Lakes Survey and Navy's National Oceanographic Data Cen and National Oceanographic Instrumentat Center. From the Department of Transportat NOAA has taken the data buoy development tivities of the Coast Guard and from the tional Science Foundation, its Sea Grant P grams. These agency subdivisions' STIN activities are reported for fiscal year 1970 though they had been part of NOAA that ye

- In addition to the amounts reported for category 4, the Department of Defense also reported under R&D obligations in part I $112.1 million of its total for the three other information activities for 1970; $109.8 million for 1971; and $108.8 for 1972.
- In addition to the amounts reported for category 4 the National Institutes of Health of the Department of Health, Education, and Welfare also reported under R&D obligations in part I $11.3 million of its total for the three other information activities for 1970; $11.6 million for 1971; and $11.6 million for 1972.
- The National Oceanic and Atmospheric Administration (NOAA) was established in fiscal year 1971 within the Department of Commerce. NOAA includes Commerce's Environmental Science Services Administration (ESSA), which is its largest component. It also has incorporated from Interior the Bureau of Commercial Fisheries, the marine sport fish activities of the Fish and Wildlife Service, and the Marine Minerals Technology Center of the Bureau of Mines. NOAA has taken over the Army Corps of Engineers' Great Lakes Survey and the Navy's National Oceanographic Data Center and National Oceanographic Instrumentation Center. From the Department of Transportation NOAA has taken the data buoy development activities of the Coast Guard and from the National Science Foundation, its Sea Grant Programs. These agency subdivisions' STINFO activities are reported for fiscal year 1970 as though they had been part of NOAA that year.
- The Environmental Protection Agency (EPA) was established in fiscal year 1971. EPA combines a number of components formerly within HEW: the National Air Pollution Control Administration, the Bureau of Solid Waste Management, and the Bureau of Water Hygiene (all previously reported under the Environmental Health Service) and portions of the Bureau of Radiological Health and the pesticide control functions of the Food and Drug Administration. EPA also includes what was previously Interior's Federal Water Pollution Control Administration, the pesticide study functions of its Fish and Wildlife Service, and the Gulf Breeze (Fla.) Biological Laboratory of its Bureau of Commercial Fisheries. In addition, EPA has taken over from the Atomic Energy Commission its environmental radiation standard-setting authority and the pesticides registration program of the Department of Agriculture's Agricultural Research Service. These agency subdivisions' STINFO activities are reported for fiscal year 1970 as though they had been part of EPA that year.

TABLE D-1. SUMMARY OF FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

ACTIVITY	ACTUAL, 1970			ESTIMATES					
				1971			1972		
	TOTAL	INTRA-MURAL	EXTRA-MURAL	TOTAL	INTRA-MURAL	EXTRA-MURAL	TOTAL	INTRA-MURAL	EXTRA-MURAL
TOTAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION................	386,783	262,978	123,805	400,408	268,142	132,266	413,049	277,859	135,190
PUBLICATION AND DISTRIBUTION...........	98,937	78,240	20,697	107,073	86,405	20,668	110,702	89,853	20,849
PUBLICATION AND DISTRIBUTION...........	92,367	75,159	17,208	99,846	83,165	16,681	103,850	86,453	17,397
SUPPORT OF PUBLICATIONS................	6,570	3,081	3,489	7,227	3,240	3,987	6,852	3,400	3,452
DOCUMENTATION, REFERENCE AND INFORMATION SERVICES.................	193,141	144,622	48,519	190,515	140,217	50,298	191,238	143,971	47,267
BIBLIOGRAPHIC AND REFERENCE SERVICES...	156,012	128,731	27,281	153,900	123,806	30,094	155,981	126,573	29,408
SPECIALIZED INFORMATION CENTERS........	31,492	14,519	16,973	30,905	14,927	15,978	30,295	15,790	14,505
TRANSLATIONS...........................	5,637	1,372	4,265	5,710	1,484	4,226	4,962	1,608	3,354
SYMPOSIA AND AUDIO/VISUAL MEDIA........	32,576	23,463	9,113	35,346	24,009	11,337	36,674	24,372	12,302
SYMPOSIA AND TECHNICAL MEETINGS........	21,447	15,992	5,455	22,005	16,376	5,629	22,708	16,636	6,072
AUDIO/VISUAL MEDIA AND OTHER FORMS OF.. ORAL COMMUNICATION...................	11,129	7,471	3,658	13,341	7,633	5,708	13,966	7,736	6,230
RESEARCH AND DEVELOPMENT IN INFORMATION SCIENCES, DOCUMENTATION AND INFORMATION SYSTEMS, TECHNIQUES AND DEVICES	62,129	16,653	45,476	67,474	17,511	49,963	74,435	19,663	54,772

TABLE D-2. FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	ACTUAL, 1970	ESTIMATES	
		1971	1972
TOTAL, ALL AGENCIES	386,783	400,408	413,049
DEPARTMENTS			
DEPARTMENT OF AGRICULTURE, TOTAL	9,753	10,700	10,547
AGRICULTURAL RESEARCH SERVICE	3,182	3,379	3,379
COOPERATIVE STATE RESEARCH SERVICE	128	124	124
ECONOMIC RESEARCH SERVICE	313	387	392
FARMER COOPERATIVE SERVICE	69	48	50
FOREST SERVICE	2,498	2,677	2,699
NATIONAL AGRICULTURAL LIBRARY	3,557	4,078	3,895
STATISTICAL REPORTING SERVICE	6	7	8
DEPARTMENT OF COMMERCE, TOTAL	60,300	68,404	71,850
BUREAU OF THE CENSUS	379	469	469
NATIONAL BUREAU OF STANDARDS	10,522	11,165	12,023
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	2,804	3,940	4,282
OFFICE OF BUSINESS ECONOMICS	150	180	190
OFFICE OF TELECOMMUNICATIONS	-	28	162
PATENT OFFICE	46,445	52,622	54,724
DEPARTMENT OF DEFENSE, TOTAL	145,204	147,258	149,954
DEPARTMENT OF THE ARMY	68,770	69,807	69,755
DEPARTMENT OF THE NAVY	15,905	16,247	16,850
DEPARTMENT OF THE AIR FORCE	21,071	18,513	17,220
DEFENSE AGENCIES	39,443	42,676	46,114
DEPARTMENTWIDE FUNDS	15	15	15
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	66,042	72,350	67,866
FOOD AND DRUG ADMINISTRATION	5,350	5,367	5,636
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	8,233	8,859	9,955
NATIONAL INSTITUTES OF HEALTH	36,892	40,143	40,179
OFFICE OF EDUCATION	15,222	17,649	11,730
SOCIAL SECURITY ADMINISTRATION	345	332	366
DEPARTMENT OF THE INTERIOR, TOTAL	12,696	13,551	13,987
BUREAU OF MINES	821	834	841
BUREAU OF OUTDOOR RECREATION	16	19	21
BUREAU OF RECLAMATION	519	510	503
BUREAU OF SPORT FISHERIES AND WILDLIFE	798	768	813
OFFICE OF LIBRARY SERVICES	950	912	912
GEOLOGICAL SURVEY	8,864	9,538	9,823
OFFICE OF COAL RESEARCH	15	18	22
OFFICE OF SALINE WATER	197	136	140
OFFICE OF WATER RESOURCES RESEARCH	516	816	912
DEPARTMENT OF JUSTICE, TOTAL			

DEPARTMENT OF COMMERCE, TOTAL	60,300	68,404	71,850
BUREAU OF THE CENSUS	379	469	469
NATIONAL BUREAU OF STANDARDS	10,522	11,165	12,023
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	2,804	3,940	4,282
OFFICE OF BUSINESS ECONOMICS	150	180	190
OFFICE OF TELECOMMUNICATIONS	-	28	162
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GEOLOGICAL SURVEY	8,864	9,538	9,823
OFFICE OF COAL RESEARCH	15	18	22
OFFICE OF SALINE WATER	197	136	140
OFFICE OF WATER RESOURCES RESEARCH	516	816	912
DEPARTMENT OF JUSTICE, TOTAL	33	50	50
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION	33	50	50
DEPARTMENT OF LABOR, TOTAL	132	132	132
MANPOWER ADMINISTRATION	132	132	132
POSTAL SERVICE	96	32	-
DEPARTMENT OF STATE, TOTAL	10,247	2,273	2,319
DEPARTMENTAL FUNDS	81	107	107
AGENCY FOR INTERNATIONAL DEVELOPMENT	10,166	2,166	2,212
DEPARTMENT OF TRANSPORTATION, TOTAL	3,295	3,876	4,460
FEDERAL AVIATION ADMINISTRATION	433	486	546
FEDERAL HIGHWAY ADMINISTRATION	1,388	1,435	1,460
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION	529	341	493
OFFICE OF THE SECRETARY	545	1,198	1,545
UNITED STATES COAST GUARD	400	416	416
OTHER AGENCIES			
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS	62	62	55
ATOMIC ENERGY COMMISSION	4,589	4,933	4,970
ENVIRONMENTAL PROTECTION AGENCY	2,411	3,147	3,087
FEDERAL COMMUNICATIONS COMMISSION	16	16	17
FEDERAL HOME LOAN BANK BOARD	31	32	33
LIBRARY OF CONGRESS	22,083	22,992	32,444
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	26,547	26,894	27,877
NATIONAL SCIENCE FOUNDATION	14,857	15,037	12,582
OFFICE OF EMERGENCY PREPAREDNESS	8	8	3
OFFICE OF SCIENCE AND TECHNOLOGY	120	140	150
SMALL BUSINESS ADMINISTRATION	3	-	5
SMITHSONIAN INSTITUTION	1,934	2,064	4,064
TENNESSEE VALLEY AUTHORITY	110	116	123
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY	214	241	274
VETERANS ADMINISTRATION	6,000	6,100	6,200

TABLE D-3. FEDERAL INTRAMURAL AND EXTRAMURAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	INTRAMURAL			EXTRAMURAL		
	ACTUAL, 1970	ESTIMATES		ACTUAL, 1970	ESTIMATES	
		1971	1972		1971	1972
TOTAL, ALL AGENCIES	262,978	268,142	277,859	123,805	132,266	135,190
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL	9,576	10,340	10,184	177	360	363
AGRICULTURAL RESEARCH SERVICE	3,182	3,379	3,379	-	-	-
COOPERATIVE STATE RESEARCH SERVICE	128	124	124	-	-	-
ECONOMIC RESEARCH SERVICE	313	387	392	-	-	-
FARMER COOPERATIVE SERVICE	69	48	50	-	-	-
FOREST SERVICE	2,498	2,677	2,699	-	-	-
NATIONAL AGRICULTURAL LIBRARY	3,380	3,718	3,532	177	360	363
STATISTICAL REPORTING SERVICE	6	7	8	-	-	-
DEPARTMENT OF COMMERCE, TOTAL	59,670	67,288	70,756	630	1,116	1,094
BUREAU OF THE CENSUS	367	457	457	12	12	12
NATIONAL BUREAU OF STANDARDS	9,932	10,558	11,407	590	607	616
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	2,779	3,443	3,816	25	497	466
OFFICE OF BUSINESS ECONOMICS	150	180	190	-	-	-
OFFICE OF TELECOMMUNICATIONS	-	28	162	-	-	-
PATENT OFFICE	46,442	52,622	54,724	3	-	-
DEPARTMENT OF DEFENSE, TOTAL	86,155	85,078	85,709	59,049	62,180	64,245
DEPARTMENT OF THE ARMY	55,240	55,989	55,740	13,530	13,818	14,015
DEPARTMENT OF THE NAVY	7,779	8,010	8,170	8,126	8,237	8,680
DEPARTMENT OF THE AIR FORCE	9,064	8,868	9,268	12,007	9,645	7,952
DEFENSE AGENCIES	14,072	12,211	12,531	25,371	30,465	33,583
DEPARTMENTWIDE FUNDS	-	-	-	15	15	15
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	34,616	37,473	30,795	31,426	34,877	37,071
FOOD AND DRUG ADMINISTRATION	2,315	2,332	2,449	3,035	3,035	3,187
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	3,236	3,538	3,541	4,997	5,321	6,414
NATIONAL INSTITUTES OF HEALTH	22,019	23,493	23,519	14,873	16,650	16,660
OFFICE OF EDUCATION	6,701	7,778	920	8,521	9,871	10,810
SOCIAL SECURITY ADMINISTRATION	345	332	366	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL	12,387	13,063	13,532	309	488	455
BUREAU OF MINES	821	834	841	-	-	-
BUREAU OF OUTDOOR RECREATION	16	19	21	-	-	-
BUREAU OF RECLAMATION	509	497	490	10	13	13
BUREAU OF SPORT FISHERIES AND WILDLIFE	671	633	678	127	135	135
OFFICE OF LIBRARY SERVICES	950	912	912	-	-	-
GEOLOGICAL SURVEY	8,864	9,538	9,823	-	-	-
OFFICE OF COAL RESEARCH	-	-	-	15	18	22
OFFICE OF SALINE WATER	165	101	105	32	35	35
OFFICE OF WATER RESOURCES RESEARCH	391	529	662	125	287	250
DEPARTMENT OF JUSTICE, TOTAL	-	-	-	33	50	50
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION	-	-	-	33	50	50
DEPARTMENT OF LABOR, TOTAL	132	132	132	-	-	-
MANPOWER ADMINISTRATION	132	132	132	-	-	-
POSTAL SERVICE	2	2	-	94	30	-

BUREAU OF THE CENSUS						
NATIONAL BUREAU OF STANDARDS	9,932	10,558	11,407	590	607	616
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	2,779	3,443	3,816	25	497	466
OFFICE OF BUSINESS ECONOMICS	150	180	190	-	-	-
OFFICE OF TELECOMMUNICATIONS	-	28	162	-	-	-
PATENT OFFICE	46,442	52,622	54,724	3	-	-
DEPARTMENT OF DEFENSE, TOTAL	86,155	85,078	85,709	59,049	62,180	64,245
DEPARTMENT OF THE ARMY	55,240	55,989	55,740	13,530	13,818	14,015
DEPARTMENT OF THE NAVY	7,779	8,010	8,170	8,126	8,237	8,680
DEPARTMENT OF THE AIR FORCE	9,064	8,868	9,268	12,007	9,645	7,952
DEFENSE AGENCIES	14,072	12,211	12,531	25,371	30,465	33,583
DEPARTMENTWIDE FUNDS	-	-	-	15	15	15
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	34,616	37,473	30,795	31,426	34,877	37,071
FOOD AND DRUG ADMINISTRATION	2,315	2,332	2,449	3,035	3,035	3,187
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	3,236	3,538	3,541	4,997	5,321	6,414
NATIONAL INSTITUTES OF HEALTH	22,019	23,493	23,519	14,873	16,650	16,660
OFFICE OF EDUCATION	6,701	7,778	920	8,521	9,871	10,810
SOCIAL SECURITY ADMINISTRATION	345	332	366	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL	12,387	13,063	13,532	309	488	455
BUREAU OF MINES	821	834	841	-	-	-
BUREAU OF OUTDOOR RECREATION	16	19	21	-	-	-
BUREAU OF RECLAMATION	509	497	490	10	13	13
BUREAU OF SPORT FISHERIES AND WILDLIFE	671	633	678	127	135	135
OFFICE OF LIBRARY SERVICES	950	912	912	-	-	-
GEOLOGICAL SURVEY	8,864	9,538	9,823	-	-	-
OFFICE OF COAL RESEARCH	-	-	-	15	18	22
OFFICE OF SALINE WATER	165	101	105	32	35	35
OFFICE OF WATER RESOURCES RESEARCH	391	529	662	125	287	250
DEPARTMENT OF JUSTICE, TOTAL	-	-	-	33	50	50
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION	-	-	-	33	50	50
DEPARTMENT OF LABOR, TOTAL	132	132	132	-	-	-
MANPOWER ADMINISTRATION	132	132	132	-	-	-
POSTAL SERVICE	2	2	-	94	30	-
DEPARTMENT OF STATE, TOTAL	9,664	1,663	1,663	583	610	656
DEPARTMENTAL FUNDS	81	107	107	-	-	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	9,583	1,556	1,556	583	610	656
DEPARTMENT OF TRANSPORTATION, TOTAL	2,044	2,331	2,878	1,251	1,545	1,582
FEDERAL AVIATION ADMINISTRATION	412	410	467	21	76	79
FEDERAL HIGHWAY ADMINISTRATION	330	355	375	1,058	1,080	1,085
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION	362	205	205	167	136	288
OFFICE OF THE SECRETARY	540	945	1,415	5	253	130
UNITED STATES COAST GUARD	400	416	416	-	-	-
OTHER AGENCIES						
ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS	62	62	55	-	-	-
ATOMIC ENERGY COMMISSION	2,917	3,121	3,209	1,672	1,812	1,761
ENVIRONMENTAL PROTECTION AGENCY	1,629	1,789	2,059	782	1,358	1,028
FEDERAL COMMUNICATIONS COMMISSION	16	16	17	-	-	-
FEDERAL HOME LOAN BANK BOARD	31	32	33	-	-	-
LIBRARY OF CONGRESS	22,040	22,992	32,444	43	-	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	12,676	12,936	13,759	13,871	13,958	14,118
NATIONAL SCIENCE FOUNDATION	1,042	1,230	1,330	13,815	13,807	11,252
OFFICE OF EMERGENCY PREPAREDNESS	3	3	3	5	5	-
OFFICE OF SCIENCE AND TECHNOLOGY	120	140	150	-	-	-
SMALL BUSINESS ADMINISTRATION	3	-	5	-	-	-
SMITHSONIAN INSTITUTION	1,909	2,034	2,589	25	30	1,475
TENNESSEE VALLEY AUTHORITY	110	116	123	-	-	-
UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY	214	241	274	-	-	-
VETERANS ADMINISTRATION	5,960	6,060	6,160	40	40	40

TABLE D-4. FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	PUBLICATION AND DISTRIBUTION			DOCUMENTATION, REFERENCE, AND INFORMATION SERVICES				SYMPOSIA AND AUDIO/VISUAL MEDIA			R&D IN INFO. SCIENCE
		TOTAL	PUBLI-CATION & DISTRI-BUTION	SUPPORT OF PUBLI-CATIONS	TOTAL	BIBLIO-GRAPHIC & REF-ERENCE	SPECIAL-IZED INFO. CENTERS	TRANS-LATIONS	TOTAL	SYM-POSIA	AUDIO/VISUAL MEDIA & OTHER	
TOTAL, ALL AGENCIES..............	386,783	98,937	92,367	6,570	193,141	156,012	31,492	5,637	32,576	21,447	11,129	62,129
DEPARTMENTS												
DEPARTMENT OF AGRICULTURE, TOTAL..	9,753	3,499	3,311	188	4,242	4,240	-	2	1,793	1,708	85	219
AGRICULTURAL RESEARCH SERVICE.....	3,182	1,703	1,525	178	732	730	-	2	747	747	-	-
COOPERATIVE STATE RESEARCH SERVICE	128	9	9	-	-	-	-	-	118	118	-	1
ECONOMIC RESEARCH SERVICE.........	313	268	268	-	2	2	-	-	43	43	-	-
FARMER COOPERATIVE SERVICE........	69	69	69	-	-	-	-	-	-	-	-	-
FOREST SERVICE....................	2,498	1,217	1,207	10	395	395	-	-	876	791	85	10
NATIONAL AGRICULTURAL LIBRARY.....	3,557	227	227	-	3,113	3,113	-	-	9	9	-	208
STATISTICAL REPORTING SERVICE.....	6	6	6	-	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL.....	60,300	40,302	40,239	63	18,120	14,333	3,541	246	609	481	128	1,269
BUREAU OF THE CENSUS..............	379	158	158	-	54	26	28	-	39	39	-	128
NATIONAL BUREAU OF STANDARDS......	10,522	1,125	1,062	63	8,266	4,952	3,292	22	431	303	128	700
NATIONAL OCEANIC AND ATMOS. ADMIN.	2,804	1,603	1,603	-	1,018	717	221	80	139	139	-	44
OFFICE OF BUSINESS ECONOMICS......	150	150	150	-	-	-	-	-	-	-	-	-
PATENT OFFICE.....................	46,445	37,266	37,266	-	8,782	8,638	-	144	-	-	-	397
DEPARTMENT OF DEFENSE, TOTAL......	145,204	26,582	24,977	1,605	67,459	58,485	7,893	1,081	18,039	12,553	5,486	33,124
DEPARTMENT OF THE ARMY............	68,770	12,206	10,858	1,348	43,390	41,320	1,377	693	11,816	9,015	2,801	1,358
DEPARTMENT OF THE NAVY............	15,905	4,548	4,458	90	5,641	3,469	1,882	290	3,284	2,861	423	2,432
DEPARTMENT OF THE AIR FORCE.......	21,071	8,887	8,776	111	5,331	2,342	2,891	98	2,699	665	2,034	4,154
DEFENSE AGENCIES..................	39,443	941	885	56	13,082	11,354	1,728	-	240	12	228	25,180
DEPARTMENTWIDE FUNDS..............	15	-	-	-	15	-	15	-	-	-	-	-
DEPT HEALTH, ED, & WELFARE, TOTAL.	66,042	5,439	3,552	1,887	41,139	27,250	12,791	1,098	4,350	2,442	1,908	15,114
FOOD AND DRUG ADMINISTRATION......	5,350	350	315	35	4,815	670	4,135	10	60	6	54	125
HEALTH SERV & MENTAL HEALTH ADM...	8,233	1,762	1,562	200	2,676	337	2,265	74	1,186	336	850	2,609
NATIONAL INSTITUTES OF HEALTH.....	36,892	3,002	1,350	1,652	21,017	17,436	2,567	1,014	2,727	1,953	774	10,146
OFFICE OF EDUCATION...............	15,222	48	48	-	12,631	8,807	3,824	-	309	79	230	2,234
SOCIAL SECURITY ADMINISTRATION....	345	277	277	-	-	-	-	-	68	68	-	-
DEPARTMENT OF THE INTERIOR, TOTAL.	12,696	6,193	6,191	2	4,689	3,801	827	61	544	538	6	1,270
BUREAU OF MINES...................	821	483	483	-	241	241	-	-	97	97	-	-
BUREAU OF OUTDOOR RECREATION......	16	9	7	2	7	-	7	-	-	-	-	-
BUREAU OF RECLAMATION.............	519	56	56	-	420	204	200	16	28	28	-	15
BUREAU OF SPORT FISH & WILDLIFE...	798	338	338	-	310	310	-	-	150	150	-	-

AGRICULTURAL RESEARCH SERVICE.....	3,182	1,703	1,525	178	732	730	-	2	747	747	-	-
COOPERATIVE STATE RESEARCH SERVICE	128	9	9	-	-	-	-	-	118	118	-	1
ECONOMIC RESEARCH SERVICE.........	313	268	268	-	2	2	-	-	43	43	-	-
FARMER COOPERATIVE SERVICE........	69	69	69	-	-	-	-	-	-	-	-	-
FOREST SERVICE....................	2,498	1,217	1,207	10	395	395	-	-	876	791	85	10
NATIONAL AGRICULTURAL LIBRARY.....	3,557	227	227	-	3,113	3,113	-	-	9	9	-	208
STATISTICAL REPORTING SERVICE.....	6	6	6	-	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL.....	60,300	40,302	40,239	63	18,120	14,333	3,541	246	609	481	128	1,269
BUREAU OF THE CENSUS..............	379	158	158	-	54	26	28	-	39	39	-	128
NATIONAL BUREAU OF STANDARDS......	10,522	1,125	1,062	63	8,266	4,952	3,292	22	431	303	128	700
NATIONAL OCEANIC AND ATMOS. ADMIN.	2,804	1,603	1,603	-	1,018	717	221	80	139	139	-	44
OFFICE OF BUSINESS ECONOMICS......	150	150	150	-	-	-	-	-	-	-	-	-
PATENT OFFICE.....................	46,445	37,266	37,266	-	8,782	8,638	-	144	-	-	-	397
DEPARTMENT OF DEFENSE, TOTAL......	145,204	26,582	24,977	1,605	67,459	58,485	7,893	1,081	18,039	12,553	5,486	33,124
DEPARTMENT OF THE ARMY............	68,770	12,206	10,858	1,348	43,390	41,320	1,377	693	11,816	9,015	2,801	1,358
DEPARTMENT OF THE NAVY............	15,905	4,548	4,458	90	5,641	3,469	1,882	290	3,284	2,861	423	2,432
DEPARTMENT OF THE AIR FORCE.......	21,071	8,887	8,776	111	5,331	2,342	2,891	98	2,699	665	2,034	4,154
DEFENSE AGENCIES..................	39,443	941	885	56	13,082	11,354	1,728	-	240	12	228	25,180
DEPARTMENTWIDE FUNDS..............	15	-	-	-	15	-	15	-	-	-	-	-
DEPT HEALTH, ED, & WELFARE, TOTAL.	66,042	5,439	3,552	1,887	41,139	27,250	12,791	1,098	4,350	2,442	1,908	15,114
FOOD AND DRUG ADMINISTRATION......	5,350	350	315	35	4,815	670	4,135	10	60	6	54	125
HEALTH SERV & MENTAL HEALTH ADM...	8,233	1,762	1,562	200	2,676	337	2,265	74	1,186	336	850	2,609
NATIONAL INSTITUTES OF HEALTH.....	36,892	3,002	1,350	1,652	21,017	17,436	2,567	1,014	2,727	1,953	774	10,146
OFFICE OF EDUCATION...............	15,222	48	48	-	12,631	8,807	3,824	-	309	79	230	2,234
SOCIAL SECURITY ADMINISTRATION....	345	277	277	-	-	-	-	-	68	68	-	-
DEPARTMENT OF THE INTERIOR, TOTAL.	12,696	6,193	6,191	2	4,689	3,801	827	61	544	538	6	1,270
BUREAU OF MINES...................	821	483	483	-	241	241	-	-	97	97	-	-
BUREAU OF OUTDOOR RECREATION......	16	9	7	2	7	-	7	-	-	-	-	-
BUREAU OF RECLAMATION.............	519	56	56	-	420	204	200	16	28	28	-	15
BUREAU OF SPORT FISH & WILDLIFE...	798	338	338	-	310	310	-	-	150	150	-	-
OFFICE OF LIBRARY SERVICES........	950	-	-	-	947	941	-	6	3	3	-	-
GEOLOGICAL SURVEY.................	8,864	5,203	5,203	-	2,158	1,589	530	39	248	248	-	1,255
OFFICE OF COAL RESEARCH...........	15	15	15	-	-	-	-	-	-	-	-	-
OFFICE OF SALINE WATER............	197	89	89	-	90	-	90	-	18	12	6	-
OFFICE OF WATER RESOURCES RESEARCH	516	-	-	-	516	516	-	-	-	-	-	-
DEPARTMENT OF JUSTICE, TOTAL......	33	-	-	-	-	-	-	-	33	33	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN..	33	-	-	-	-	-	-	-	33	33	-	-
DEPARTMENT OF LABOR, TOTAL........	132	92	92	-	40	40	-	-	-	-	-	-
MANPOWER ADMINISTRATION...........	132	92	92	-	40	40	-	-	-	-	-	-
POSTAL SERVICE....................	96	-	-	-	-	-	-	-	-	-	-	96
DEPARTMENT OF STATE, TOTAL........	10,247	578	-	578	9,664	9,664	-	-	5	5	-	-
DEPARTMENTAL FUNDS................	81	-	-	-	81	81	-	-	-	-	-	-
AGENCY FOR INTERNATIONAL DEVELOP..	10,166	578	-	578	9,583	9,583	-	-	5	5	-	-
DEPT. OF TRANSPORTATION, TOTAL....	3,295	238	238	-	2,999	610	2,389	-	58	53	5	-
FEDERAL AVIATION ADMINISTRATION...	433	47	47	-	358	358	-	-	28	23	5	-
FEDERAL HIGHWAY ADMINISTRATION....	1,388	155	155	-	1,203	150	1,053	-	30	30	-	-
NAT'L HIGHWAY TRAFFIC SAFETY ADMIN	529	31	31	-	498	102	396	-	-	-	-	-
OFFICE OF THE SECRETARY...........	545	5	5	-	540	-	540	-	-	-	-	-
UNITED STATES COAST GUARD.........	400	-	-	-	400	-	400	-	-	-	-	-
OTHER AGENCIES												
ADVIS COMM ON INTERGOVT RELATIONS.	62	44	44	-	17	17	-	-	1	1	-	-
ATOMIC ENERGY COMMISSION..........	4,589	2,339	2,339	-	2,225	2,225	-	-	25	25	-	-
ENVIRONMENTAL PROTECTION AGENCY...	2,411	924	913	11	925	16	872	37	291	207	84	271
FEDERAL COMMUNICATIONS COMMISSION.	16	5	5	-	5	5	-	-	6	6	-	-
FEDERAL HOME LOAN BANK BOARD......	31	-	-	-	31	31	-	-	-	-	-	-
LIBRARY OF CONGRESS...............	22,083	-	-	-	20,139	20,139	-	-	12	12	-	1,932
NATIONAL AERONAUTICS & SPACE ADMIN	26,547	10,219	8,769	1,450	11,392	8,039	3,152	201	3,906	1,854	2,052	1,030
NATIONAL SCIENCE FOUNDATION.......	14,857	546	-	546	6,229	3,353	-	2,876	648	648	-	7,434
OFFICE OF EMERGENCY PREPAREDNESS..	8	-	-	-	3	3	-	-	5	5	-	-
OFFICE OF SCIENCE AND TECHNOLOGY..	120	30	20	10	60	40	10	10	10	5	5	20
SMALL BUSINESS ADMINISTRATION.....	3	3	3	-	-	-	-	-	-	-	-	-
SMITHSONIAN INSTITUTION...........	1,934	1,133	1,113	20	606	581	-	25	115	115	-	80
TENNESSEE VALLEY AUTHORITY........	110	-	-	-	110	110	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGCY	214	166	6	160	47	30	17	-	1	1	-	-
VETERANS ADMINISTRATION...........	6,000	605	555	50	3,000	3,000	-	-	2,125	755	1,370	270

TABLE D-5. FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	PUBLICATION AND DISTRIBUTION			DOCUMENTATION, REFERENCE, AND INFORMATION SERVICES				SYMPOSIA AND AUDIO/VISUAL MEDIA			R&D IN INFO. SCIENCE
		TOTAL	PUBLI-CATION & DISTRI-BUTION	SUPPORT OF PUBLI-CATIONS	TOTAL	BIBLIO-GRAPHIC & REF-ERENCE	SPECIAL-IZED INFO. CENTERS	TRANS-LATIONS	TOTAL	SYM-POSIA	AUDIO/VISUAL MEDIA & OTHER	
TOTAL, ALL AGENCIES...............	400,408	107,073	99,846	7,227	190,515	153,900	30,905	5,710	35,346	22,005	13,341	67,474 [a]
DEPARTMENTS												
DEPARTMENT OF AGRICULTURE, TOTAL..	10,700	3,520	3,304	216	5,046	5,043	-	3	1,864	1,774	90	270
AGRICULTURAL RESEARCH SERVICE.....	3,379	1,827	1,622	205	802	799	-	3	750	750	-	-
COOPERATIVE STATE RESEARCH SERVICE	124	9	9	-	-	-	-	-	114	114	-	1
ECONOMIC RESEARCH SERVICE..........	387	323	323	-	12	12	-	-	52	52	-	-
FARMER COOPERATIVE SERVICE........	48	48	48	-	-	-	-	-	-	-	-	-
FOREST SERVICE.....................	2,677	1,306	1,295	11	423	423	-	-	938	848	90	10
NATIONAL AGRICULTURAL LIBRARY.....	4,078	-	-	-	3,809	3,809	-	-	10	10	-	259
STATISTICAL REPORTING SERVICE.....	7	7	7	-	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL.....	68,404	46,995	46,905	90	19,025	14,879	3,744	402	846	704	142	1,538
BUREAU OF THE CENSUS..............	469	225	225	-	67	28	39	-	39	39	-	138
NATIONAL BUREAU OF STANDARDS......	11,165	1,182	1,117	65	8,643	5,194	3,427	22	614	482	132	726
NATIONAL OCEANIC AND ATMOS. ADMIN.	3,940	2,330	2,305	25	1,331	833	278	220	193	183	10	86
OFFICE OF BUSINESS ECONOMICS......	180	180	180	-	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS......	28	-	-	-	-	-	-	-	-	-	-	28
PATENT OFFICE......................	52,622	43,078	43,078	-	8,984	8,824	-	160	-	-	-	560
DEPARTMENT OF DEFENSE, TOTAL......	147,258	26,369	24,715	1,654	65,216	57,074	7,037	1,105	18,296	12,647	5,649	37,377
DEPARTMENT OF THE ARMY............	69,807	12,571	11,184	1,387	44,000	41,860	1,429	711	11,851	9,034	2,817	1,385
DEPARTMENT OF THE NAVY............	16,247	4,792	4,701	91	5,425	3,550	1,600	275	3,440	3,000	440	2,590
DEPARTMENT OF THE AIR FORCE.......	18,513	8,011	7,902	109	4,478	2,121	2,238	119	2,772	601	2,171	3,252
DEFENSE AGENCIES..................	42,676	995	928	67	11,298	9,543	1,755	-	233	12	221	30,150
DEPARTMENTWIDE FUNDS..............	15	-	-	-	15	-	15	-	-	-	-	-
DEPT HEALTH, ED, & WELFARE, TOTAL.	72,350	6,516	4,358	2,158	45,128	31,530	12,281	1,317	5,958	2,439	3,519	14,748
FOOD AND DRUG ADMINISTRATION......	5,367	357	325	32	4,825	674	4,140	11	58	5	53	127
HEALTH SERV & MENTAL HEALTH ADM...	8,859	2,515	2,115	400	2,928	389	2,471	68	1,107	374	733	2,309
NATIONAL INSTITUTES OF HEALTH.....	40,143	3,181	1,455	1,726	24,597	20,713	2,646	1,238	2,774	1,991	783	9,591
OFFICE OF EDUCATION...............	17,649	200	200	-	12,778	9,754	3,024	-	1,950	-	1,950	2,721
SOCIAL SECURITY ADMINISTRATION....	332	263	263	-	-	-	-	-	69	69	-	-
DEPARTMENT OF THE INTERIOR, TOTAL.	13,551	6,488	6,484	4	5,204	4,268	877	59	563	553	10	1,296
BUREAU OF MINES....................	834	474	474	-	260	260	-	-	100	100	-	-
BUREAU OF OUTDOOR RECREATION......	19	12	8	4	7	-	7	-	-	-	-	-
BUREAU OF RECLAMATION..............	510	69	69	-	410	211	175	24	31	31	-	-
BUREAU OF SPORT FISH & WILDLIFE...	768	273	273	-	360	360	-	-	135	135	-	-
OFFICE OF LIBRARY SERVICES........	912	-	-	-	908	903	-	5	4	4	-	-
GEOLOGICAL SURVEY..................	9,538	5,559	5,559	-	2,412	1,718	664	30	271	271	-	1,296
OFFICE OF COAL RESEARCH...........	18	16	16	-	-	-	-	-	2	2	-	-
OFFICE OF SALINE WATER............	136	85	85	-	31	-	31	-	20	10	10	-
OFFICE OF WATER RESOURCES RESEARCH	816	-	-	-	816	816	-	-	-	-	-	-

NATIONAL BUREAU OF STANDARDS......	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NATIONAL OCEANIC AND ATMOS. ADMIN.	3,940	2,330	2,305	25	1,331	833	278	220	193	183	10	86
OFFICE OF BUSINESS ECONOMICS......	180	180	180	-	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS......	28	-	-	-	-	-	-	-	-	-	-	28
PATENT OFFICE......................	52,622	43,078	43,078	-	8,984	8,824	-	160	-	-	-	560
DEPARTMENT OF DEFENSE, TOTAL......	147,258	26,369	24,715	1,654	65,216	57,074	7,037	1,105	18,296	12,647	5,649	37,377
DEPARTMENT OF THE ARMY............	69,807	12,571	11,184	1,387	44,000	41,860	1,429	711	11,851	9,034	2,817	1,385
DEPARTMENT OF THE NAVY............	16,247	4,792	4,701	91	5,425	3,550	1,600	275	3,440	3,000	440	2,590
DEPARTMENT OF THE AIR FORCE.......	18,513	8,011	7,902	109	4,478	2,121	2,238	119	2,772	601	2,171	3,252
DEFENSE AGENCIES..................	42,676	995	928	67	11,298	9,543	1,755	-	233	12	221	30,150
DEPARTMENTWIDE FUNDS..............	15	-	-	-	15	-	15	-	-	-	-	-
DEPT HEALTH, ED, & WELFARE, TOTAL.	72,350	6,516	4,358	2,158	45,128	31,530	12,281	1,317	5,958	2,439	3,519	14,748
FOOD AND DRUG ADMINISTRATION......	5,367	357	325	32	4,825	674	4,140	11	58	5	53	127
HEALTH SERV & MENTAL HEALTH ADM...	8,859	2,515	2,115	400	2,928	389	2,471	68	1,107	374	733	2,309
NATIONAL INSTITUTES OF HEALTH.....	40,143	3,181	1,455	1,726	24,597	20,713	2,646	1,238	2,774	1,991	783	9,591
OFFICE OF EDUCATION...............	17,649	200	200	-	12,778	9,754	3,024	-	1,950	-	1,950	2,721
SOCIAL SECURITY ADMINISTRATION....	332	263	263	-	-	-	-	-	69	69	-	-
DEPARTMENT OF THE INTERIOR, TOTAL.	13,551	6,488	6,484	4	5,204	4,268	877	59	563	553	10	1,296
BUREAU OF MINES...................	834	474	474	-	260	260	-	-	100	100	-	-
BUREAU OF OUTDOOR RECREATION......	19	12	8	4	7	-	7	-	-	-	-	-
BUREAU OF RECLAMATION.............	510	69	69	-	410	211	175	24	31	31	-	-
BUREAU OF SPORT FISH & WILDLIFE...	768	273	273	-	360	360	-	-	135	135	-	-
OFFICE OF LIBRARY SERVICES........	912	-	-	-	908	903	-	5	4	4	-	-
GEOLOGICAL SURVEY.................	9,538	5,559	5,559	-	2,412	1,718	664	30	271	271	-	1,296
OFFICE OF COAL RESEARCH...........	18	16	16	-	-	-	-	-	2	2	-	-
OFFICE OF SALINE WATER............	136	85	85	-	31	-	31	-	20	10	10	-
OFFICE OF WATER RESOURCES RESEARCH	816	-	-	-	816	816	-	-	-	-	-	-
DEPARTMENT OF JUSTICE, TOTAL......	50	-	-	-	-	-	-	-	50	50	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN..	50	-	-	-	-	-	-	-	50	50	-	-
DEPARTMENT OF LABOR, TOTAL........	132	92	92	-	40	40	-	-	-	-	-	-
MANPOWER ADMINISTRATION...........	132	92	92	-	40	40	-	-	-	-	-	-
POSTAL SERVICE....................	32	-	-	-	-	-	-	-	-	-	-	32
DEPARTMENT OF STATE, TOTAL........	2,273	572	-	572	1,663	1,663	-	-	38	38	-	-
DEPARTMENTAL FUNDS................	107	-	-	-	107	107	-	-	-	-	-	-
AGENCY FOR INTERNATIONAL DEVELOP..	2,166	572	-	572	1,556	1,556	-	-	38	38	-	-
DEPT. OF TRANSPORTATION, TOTAL....	3,876	236	234	2	3,432	688	2,744	-	58	53	5	150
FEDERAL AVIATION ADMINISTRATION...	486	47	47	-	411	411	-	-	28	23	5	-
FEDERAL HIGHWAY ADMINISTRATION....	1,435	155	155	-	1,250	175	1,075	-	30	30	-	-
NAT'L HIGHWAY TRAFFIC SAFETY ADMIN	341	30	30	-	311	102	209	-	-	-	-	-
OFFICE OF THE SECRETARY...........	1,198	4	2	2	1,044	-	1,044	-	-	-	-	150
UNITED STATES COAST GUARD.........	416	-	-	-	416	-	416	-	-	-	-	-
OTHER AGENCIES												
ADVIS COMM ON INTERGOVT RELATIONS.	62	33	33	-	25	25	-	-	4	4	-	-
ATOMIC ENERGY COMMISSION..........	4,933	2,563	2,563	-	2,306	2,306	-	-	64	64	-	-
ENVIRONMENTAL PROTECTION AGENCY...	3,147	994	978	16	1,430	22	1,013	395	354	221	133	369
FEDERAL COMMUNICATIONS COMMISSION.	16	5	5	-	5	5	-	-	6	6	-	-
FEDERAL HOME LOAN BANK BOARD......	32	-	-	-	32	32	-	-	-	-	-	-
LIBRARY OF CONGRESS...............	22,992	-	-	-	20,464	20,464	-	-	13	13	-	2,515
NATIONAL AERONAUTICS & SPACE ADMIN	26,894	9,941	8,424	1,517	11,507	8,157	3,174	176	4,239	1,846	2,393	1,207
NATIONAL SCIENCE FOUNDATION.......	15,037	745	-	745	6,033	3,815	-	2,218	697	697	-	7,562
OFFICE OF EMERGENCY PREPAREDNESS..	8	-	-	-	3	3	-	-	5	5	-	-
OFFICE OF SCIENCE AND TECHNOLOGY..	140	40	25	15	70	45	15	10	10	5	5	20
SMITHSONIAN INSTITUTION...........	2,064	1,175	1,155	20	669	644	-	25	130	130	-	90
TENNESSEE VALLEY AUTHORITY........	116	-	-	-	116	116	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGCY	241	174	6	168	51	31	20	-	1	1	-	15
VETERANS ADMINISTRATION...........	6,100	615	565	50	3,050	3,050	-	-	2,150	755	1,395	285

TABLE D-6. FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	PUBLICATION AND DISTRIBUTION			DOCUMENTATION, REFERENCE, AND INFORMATION SERVICES				SYMPOSIA AND AUDIO/VISUAL MEDIA			R&D IN INFO. SCIENCE
		TOTAL	PUBLI-CATION & DISTRI-BUTION	SUPPORT OF PUBLI-CATIONS	TOTAL	BIBLIO-GRAPHIC & REF-ERENCE	SPECIAL-IZED INFO. CENTERS	TRANS-LATIONS	TOTAL	SYM-POSIA	AUDIO/VISUAL MEDIA & OTHER	
TOTAL, ALL AGENCIES..............	413,049	110,702	103,850	6,852	191,238	155,981	30,295	4,962	36,674	22,708	13,966	74,435
DEPARTMENTS												
DEPARTMENT OF AGRICULTURE, TOTAL..	10,547	3,537	3,322	215	4,863	4,860	-	3	1,872	1,781	91	275
AGRICULTURAL RESEARCH SERVICE.....	3,379	1,827	1,622	205	802	799	-	3	750	750	-	-
COOPERATIVE STATE RESEARCH SERVICE	124	9	9	-	-	-	-	-	114	114	-	1
ECONOMIC RESEARCH SERVICE.........	392	327	327	-	13	13	-	-	52	52	-	-
FARMER COOPERATIVE SERVICE........	50	50	50	-	-	-	-	-	-	-	-	-
FOREST SERVICE....................	2,699	1,316	1,306	10	426	426	-	-	946	855	91	11
NATIONAL AGRICULTURAL LIBRARY.....	3,895	-	-	-	3,622	3,622	-	-	10	10	-	263
STATISTICAL REPORTING SERVICE.....	8	8	8	-	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL.....	71,850	49,245	49,150	95	20,017	15,574	3,984	459	873	733	140	1,715
BUREAU OF THE CENSUS..............	469	225	225	-	67	28	39	-	39	39	-	138
NATIONAL BUREAU OF STANDARDS......	12,023	1,264	1,197	67	9,351	5,720	3,609	22	705	570	135	703
NATIONAL OCEANIC AND ATMOS. ADMIN.	4,282	2,437	2,409	28	1,579	971	336	272	129	124	5	137
OFFICE OF BUSINESS ECONOMICS......	190	190	190	-	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS......	162	-	-	-	-	-	-	-	-	-	-	162
PATENT OFFICE.....................	54,724	45,129	45,129	-	9,020	8,855	-	165	-	-	-	575
DEPARTMENT OF DEFENSE, TOTAL......	149,954	26,796	25,111	1,685	63,575	57,427	5,024	1,124	18,582	12,843	5,739	41,001
DEPARTMENT OF THE ARMY............	69,755	12,614	11,217	1,397	43,871	41,648	1,508	715	11,877	9,013	2,864	1,393
DEPARTMENT OF THE NAVY............	16,850	5,070	4,970	100	5,380	3,780	1,310	290	3,640	3,180	460	2,760
DEPARTMENT OF THE AIR FORCE.......	17,220	8,112	7,996	116	2,740	2,190	431	119	2,869	638	2,231	3,499
DEFENSE AGENCIES..................	46,114	1,000	928	72	11,569	9,809	1,760	-	196	12	184	33,349
DEPARTMENTWIDE FUNDS..............	15	-	-	-	15	-	15	-	-	-	-	-
DEPT HEALTH, ED, & WELFARE, TOTAL.	67,866	6,780	4,852	1,928	38,362	24,754	12,412	1,196	6,467	2,561	3,906	16,257
FOOD AND DRUG ADMINISTRATION......	5,636	375	341	34	5,067	708	4,347	12	61	6	55	133
HEALTH SERV & MENTAL HEALTH ADM...	9,955	2,458	2,458	-	3,172	385	2,668	119	1,414	414	1,000	2,911
NATIONAL INSTITUTES OF HEALTH.....	40,179	3,465	1,571	1,894	24,183	20,848	2,270	1,065	2,868	2,067	801	9,663
OFFICE OF EDUCATION...............	11,730	190	190	-	5,940	2,813	3,127	-	2,050	-	2,050	3,550
SOCIAL SECURITY ADMINISTRATION....	366	292	292	-	-	-	-	-	74	74	-	-
DEPARTMENT OF THE INTERIOR, TOTAL.	13,987	6,679	6,675	4	5,369	4,416	876	77	613	602	11	1,326
BUREAU OF MINES...................	841	472	472	-	269	269	-	-	100	100	-	-
BUREAU OF OUTDOOR RECREATION......	21	12	8	4	7	-	7	-	2	1	1	-

NATIONAL AGRICULTURAL LIBRARY.....	3,895	-	-	-	3,622	3,622	-	-	10	10	-	263
STATISTICAL REPORTING SERVICE.....	8	8	8	-	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL.....	71,850	49,245	49,150	95	20,017	15,574	3,984	459	873	733	140	1,715
BUREAU OF THE CENSUS..............	469	225	225	-	67	28	39	-	39	39	-	138
NATIONAL BUREAU OF STANDARDS......	12,023	1,264	1,197	67	9,351	5,720	3,609	22	705	570	135	703
NATIONAL OCEANIC AND ATMOS. ADMIN.	4,282	2,437	2,409	28	1,579	971	336	272	129	124	5	137
OFFICE OF BUSINESS ECONOMICS......	190	190	190	-	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS......	162	-	-	-	-	-	-	-	-	-	-	162
PATENT OFFICE.....................	54,724	45,129	45,129	-	9,020	8,855	-	165	-	-	-	575
DEPARTMENT OF DEFENSE, TOTAL......	149,954	26,796	25,111	1,685	63,575	57,427	5,024	1,124	18,582	12,843	5,739	41,001
DEPARTMENT OF THE ARMY............	69,755	12,614	11,217	1,397	43,871	41,648	1,508	715	11,877	9,013	2,864	1,393
DEPARTMENT OF THE NAVY............	16,850	5,070	4,970	100	5,380	3,780	1,310	290	3,640	3,180	460	2,760
DEPARTMENT OF THE AIR FORCE.......	17,220	8,112	7,996	116	2,740	2,190	431	119	2,869	638	2,231	3,499
DEFENSE AGENCIES..................	46,114	1,000	928	72	11,569	9,809	1,760	-	196	12	184	33,349
DEPARTMENTWIDE FUNDS..............	15	-	-	-	15	-	15	-	-	-	-	-
DEPT HEALTH, ED, & WELFARE, TOTAL.	67,866	6,780	4,852	1,928	38,362	24,754	12,412	1,196	6,467	2,561	3,906	16,257
FOOD AND DRUG ADMINISTRATION......	5,636	375	341	34	5,067	708	4,347	12	61	6	55	133
HEALTH SERV & MENTAL HEALTH ADM...	9,955	2,458	2,458	-	3,172	385	2,668	119	1,414	414	1,000	2,911
NATIONAL INSTITUTES OF HEALTH.....	40,179	3,465	1,571	1,894	24,183	20,848	2,270	1,065	2,868	2,067	801	9,663
OFFICE OF EDUCATION...............	11,730	190	190	-	5,940	2,813	3,127	-	2,050	-	2,050	3,550
SOCIAL SECURITY ADMINISTRATION....	366	292	292	-	-	-	-	-	74	74	-	-
DEPARTMENT OF THE INTERIOR, TOTAL.	13,987	6,679	6,675	4	5,369	4,416	876	77	613	602	11	1,326
BUREAU OF MINES...................	841	472	472	-	269	269	-	-	100	100	-	-
BUREAU OF OUTDOOR RECREATION......	21	12	8	4	7	-	7	-	2	1	1	-
BUREAU OF RECLAMATION.............	503	72	72	-	400	201	175	24	31	31	-	-
BUREAU OF SPORT FISH & WILDLIFE...	813	284	284	-	366	357	-	9	163	163	-	-
OFFICE OF LIBRARY SERVICES........	912	-	-	-	908	903	-	5	4	4	-	-
GEOLOGICAL SURVEY.................	9,823	5,731	5,731	-	2,477	1,774	664	39	289	289	-	1,326
OFFICE OF COAL RESEARCH...........	22	18	18	-	-	-	-	-	4	4	-	-
OFFICE OF SALINE WATER............	140	90	90	-	30	-	30	-	20	10	10	-
OFFICE OF WATER RESOURCES RESEARCH	912	-	-	-	912	912	-	-	-	-	-	-
DEPARTMENT OF JUSTICE, TOTAL......	50	-	-	-	-	-	-	-	50	50	-	-
LAW ENFORCEMENT ASSISTANCE ADMIN..	50	-	-	-	-	-	-	-	50	50	-	-
DEPARTMENT OF LABOR, TOTAL........	132	92	92	-	40	40	-	-	-	-	-	-
MANPOWER ADMINISTRATION...........	132	92	92	-	40	40	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL........	2,319	578	-	578	1,663	1,663	-	-	78	78	-	-
DEPARTMENTAL FUNDS................	107	-	-	-	107	107	-	-	-	-	-	-
AGENCY FOR INTERNATIONAL DEVELOP..	2,212	578	-	578	1,556	1,556	-	-	78	78	-	-
DEPT. OF TRANSPORTATION, TOTAL....	4,460	240	240	-	4,132	763	3,369	-	58	53	5	30
FEDERAL AVIATION ADMINISTRATION...	546	47	47	-	471	471	-	-	28	23	5	-
FEDERAL HIGHWAY ADMINISTRATION....	1,460	165	165	-	1,265	190	1,075	-	30	30	-	-
NAT'L HIGHWAY TRAFFIC SAFETY ADMIN	493	28	28	-	465	102	363	-	-	-	-	-
OFFICE OF THE SECRETARY...........	1,545	-	-	-	1,515	-	1,515	-	-	-	-	30
UNITED STATES COAST GUARD.........	416	-	-	-	416	-	416	-	-	-	-	-
OTHER AGENCIES												
ADVIS COMM ON INTERGOVT RELATIONS.	55	30	30	-	20	20	-	-	5	5	-	-
ATOMIC ENERGY COMMISSION..........	4,970	2,536	2,536	-	2,338	2,338	-	-	96	96	-	-
ENVIRONMENTAL PROTECTION AGENCY...	3,087	1,158	1,142	16	1,082	25	1,015	42	456	320	136	391
FEDERAL COMMUNICATIONS COMMISSION.	17	5	5	-	5	5	-	-	7	7	-	-
FEDERAL HOME LOAN BANK BOARD......	33	-	-	-	33	33	-	-	-	-	-	-
LIBRARY OF CONGRESS...............	32,444	-	-	-	28,515	28,515	-	-	13	13	-	3,916
NATIONAL AERONAUTICS & SPACE ADMIN	27,877	10,262	8,699	1,563	11,944	8,197	3,570	177	4,389	1,876	2,513	1,282
NATIONAL SCIENCE FOUNDATION.......	12,582	503	-	503	3,664	1,840	-	1,824	678	678	-	7,737
OFFICE OF EMERGENCY PREPAREDNESS..	3	-	-	-	3	3	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY..	150	40	25	15	70	45	15	10	10	5	5	30
SMALL BUSINESS ADMINISTRATION.....	5	5	5	-	-	-	-	-	-	-	-	-
SMITHSONIAN INSTITUTION...........	4,064	1,419	1,394	25	2,255	2,205	-	50	240	240	-	150
TENNESSEE VALLEY AUTHORITY........	123	-	-	-	123	123	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGCY	274	182	7	175	65	35	30	-	2	2	-	25
VETERANS ADMINISTRATION...........	6,200	615	565	50	3,100	3,100	-	-	2,185	765	1,420	300

TABLE D-7. FEDERAL INTRAMURAL AND EXTRAMURAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRAMURAL					EXTRAMURAL				
		TOTAL	PUBLICA-TION AND DISTRIB.	DOC,REF, & INFO. SERVICE	SYMPOSIA & AUDIO/VISUAL	R&D IN INFO. SCIENCE	TOTAL	PUBLICA-TION AND DISTRIB.	DOC,REF, & INFO. SERVICE	SYMPOSIA & AUDIO/VISUAL	R&D IN INFO. SCIENCE
TOTAL, ALL AGENCIES..............	386,783	262,978	78,240	144,622	23,463	16,653	123,805	20,697	48,519	9,113	45,476
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL..	9,753	9,576	3,485	4,180	1,793	118	177	14	62	-	101
AGRICULTURAL RESEARCH SERVICE.....	3,182	3,182	1,703	732	747	-	-	-	-	-	-
COOPERATIVE STATE RESEARCH SERVICE	128	128	9	-	118	1	-	-	-	-	-
ECONOMIC RESEARCH SERVICE.........	313	313	268	2	43	-	-	-	-	-	-
FARMER COOPERATIVE SERVICE........	69	69	69	-	-	-	-	-	-	-	-
FOREST SERVICE....................	2,498	2,498	1,217	395	876	10	-	-	-	-	-
NATIONAL AGRICULTURAL LIBRARY.....	3,557	3,380	213	3,051	9	107	177	14	62	-	101
STATISTICAL REPORTING SERVICE.....	6	6	6	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL.....	60,300	59,670	40,293	17,532	591	1,254	630	9	588	18	15
BUREAU OF THE CENSUS..............	379	367	158	54	27	128	12	-	-	12	-
NATIONAL BUREAU OF STANDARDS......	10,522	9,932	1,116	7,703	425	688	590	9	563	6	12
NATIONAL OCEANIC AND ATMOS. ADMIN.	2,804	2,779	1,603	993	139	44	25	-	25	-	-
OFFICE OF BUSINESS ECONOMICS......	150	150	150	-	-	-	-	-	-	-	-
PATENT OFFICE.....................	46,445	46,442	37,266	8,782	-	394	3	-	-	-	3
DEPARTMENT OF DEFENSE, TOTAL......	145,204	86,155	15,767	51,825	13,564	4,999	59,049	10,815	15,634	4,475	28,125
DEPARTMENT OF THE ARMY............	68,770	55,240	9,775	34,906	9,471	1,088	13,530	2,431	8,484	2,345	270
DEPARTMENT OF THE NAVY............	15,905	7,779	2,036	3,147	1,421	1,175	8,126	2,512	2,494	1,863	1,257
DEPARTMENT OF THE AIR FORCE.......	21,071	9,064	3,273	2,187	2,432	1,172	12,007	5,614	3,144	267	2,982
DEFENSE AGENCIES..................	39,443	14,072	683	11,585	240	1,564	25,371	258	1,497	-	23,616
DEPARTMENTWIDE FUNDS..............	15	-	-	-	-	-	15	-	15	-	-
DEPT HEALTH, ED, & WELFARE, TOTAL.	66,042	34,616	3,647	23,493	2,094	5,382	31,426	1,792	17,646	2,256	9,732
FOOD AND DRUG ADMINISTRATION......	5,350	2,315	250	1,985	60	20	3,035	100	2,830	-	105
HEALTH SERV & MENTAL HEALTH ADM...	8,233	3,236	1,233	1,745	246	12	4,997	529	931	940	2,597
NATIONAL INSTITUTES OF HEALTH.....	36,892	22,019	1,839	13,124	1,706	5,350	14,873	1,163	7,893	1,021	4,796
OFFICE OF EDUCATION...............	15,222	6,701	48	6,639	14	-	8,521	-	5,992	295	2,234
SOCIAL SECURITY ADMINISTRATION....	345	345	277	-	68	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL.	12,696	12,387	6,152	4,427	538	1,270	309	41	262	6	-
BUREAU OF MINES...................	821	821	483	241	97	-	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION......	16	16	9	7	-	-	-	-	-	-	-
BUREAU OF RECLAMATION.............	519	509	56	410	28	15	10	-	10	-	-
BUREAU OF SPORT FISH & WILDLIFE...	798	671	338	183	150	-	127	-	127	-	-
OFFICE OF LIBRARY SERVICES........	950	950	-	947	3	-	-	-	-	-	-
GEOLOGICAL SURVEY.................	8,864	8,864	5,203	2,158	248	1,255	-	-	-	-	-
OFFICE OF COAL RESEARCH...........	15	-	-	-	-	-	15	15	-	-	-
OFFICE OF SALINE WATER............	197	165	63	90	12	-	32	26	-	6	-
OFFICE OF WATER RESOURCES RESEARCH	516	391	-	391	-	-	125	-	125	-	-
DEPARTMENT OF JUSTICE, TOTAL......	33	-	-	-	-	-	33	-	-	33	-
LAW ENFORCEMENT ASSISTANCE ADMIN..	33	-	-	-	-	-	33	-	-	33	-
DEPARTMENT OF LABOR, TOTAL........	132	132	92	40	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION...........	132	132	92	40	-	-	-	-	-	-	-
POSTAL SERVICE....................	96	2	-	-	-	2	94	-	-	-	94

DEPARTMENT OF THE ARMY............	68,770	55,240	9,775	34,906	9,471	1,088	13,530	2,431	8,484	2,345	270
DEPARTMENT OF THE NAVY............	15,905	7,779	2,036	3,147	1,421	1,175	8,126	2,512	2,494	1,863	1,257
DEPARTMENT OF THE AIR FORCE.......	21,071	9,064	3,273	2,187	2,432	1,172	12,007	5,614	3,144	267	2,982
DEFENSE AGENCIES..................	39,443	14,072	683	11,585	240	1,564	25,371	258	1,497	-	23,616
DEPARTMENTWIDE FUNDS..............	15	-	-	-	-	-	15	-	15	-	-
DEPT HEALTH, ED, & WELFARE, TOTAL.	66,042	34,616	3,647	23,493	2,094	5,382	31,426	1,792	17,646	2,256	9,732
FOOD AND DRUG ADMINISTRATION......	5,350	2,315	250	1,985	60	20	3,035	100	2,830	-	105
HEALTH SERV & MENTAL HEALTH ADM...	8,233	3,236	1,233	1,745	246	12	4,997	529	931	940	2,597
NATIONAL INSTITUTES OF HEALTH.....	36,892	22,019	1,839	13,124	1,706	5,350	14,873	1,163	7,893	1,021	4,796
OFFICE OF EDUCATION...............	15,222	6,701	48	6,639	14	-	8,521	-	5,992	295	2,234
SOCIAL SECURITY ADMINISTRATION....	345	345	277	-	68	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL.	12,696	12,387	6,152	4,427	538	1,270	309	41	262	6	-
BUREAU OF MINES...................	821	821	483	241	97	-	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION......	16	16	9	7	-	-	-	-	-	-	-
BUREAU OF RECLAMATION.............	519	509	56	410	28	15	10	-	10	-	-
BUREAU OF SPORT FISH & WILDLIFE...	798	671	338	183	150	-	127	-	127	-	-
OFFICE OF LIBRARY SERVICES........	950	950	-	947	3	-	-	-	-	-	-
GEOLOGICAL SURVEY.................	8,864	8,864	5,203	2,158	248	1,255	-	-	-	-	-
OFFICE OF COAL RESEARCH...........	15	-	-	-	-	-	15	15	-	-	-
OFFICE OF SALINE WATER............	197	165	63	90	12	-	32	26	-	6	-
OFFICE OF WATER RESOURCES RESEARCH	516	391	-	391	-	-	125	-	125	-	-
DEPARTMENT OF JUSTICE, TOTAL......	33	-	-	-	-	-	33	-	-	33	-
LAW ENFORCEMENT ASSISTANCE ADMIN..	33	-	-	-	-	-	33	-	-	33	-
DEPARTMENT OF LABOR, TOTAL........	132	132	92	40	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION...........	132	132	92	40	-	-	-	-	-	-	-
POSTAL SERVICE....................	96	2	-	-	-	2	94	-	-	-	94
DEPARTMENT OF STATE, TOTAL........	10,247	9,664	-	9,664	-	-	583	578	-	5	-
DEPARTMENTAL FUNDS................	81	81	-	81	-	-	-	-	-	-	-
AGENCY FOR INTERNATIONAL DEVELOP..	10,166	9,583	-	9,583	-	-	583	578	-	5	-
DEPT. OF TRANSPORTATION, TOTAL....	3,295	2,044	101	1,885	58	-	1,251	137	1,114	-	-
FEDERAL AVIATION ADMINISTRATION...	433	412	26	358	28	-	21	21	-	-	-
FEDERAL HIGHWAY ADMINISTRATION....	1,388	330	75	225	30	-	1,058	80	978	-	-
NAT'L HIGHWAY TRAFFIC SAFETY ADMIN	529	362	-	362	-	-	167	31	136	-	-
OFFICE OF THE SECRETARY...........	545	540	-	540	-	-	5	5	-	-	-
UNITED STATES COAST GUARD.........	400	400	-	400	-	-	-	-	-	-	-
OTHER AGENCIES											
ADVIS COMM ON INTERGOVT RELATIONS.	62	62	44	17	1	-	-	-	-	-	-
ATOMIC ENERGY COMMISSION..........	4,589	2,917	1,655	1,262	-	-	1,672	684	963	25	-
ENVIRONMENTAL PROTECTION AGENCY...	2,411	1,629	818	477	215	119	782	106	448	76	152
FEDERAL COMMUNICATIONS COMMISSION.	16	16	5	5	6	-	-	-	-	-	-
FEDERAL HOME LOAN BANK BOARD......	31	31	-	31	-	-	-	-	-	-	-
LIBRARY OF CONGRESS...............	22,083	22,040	-	20,139	12	1,889	43	-	-	-	43
NATIONAL AERONAUTICS & SPACE ADMIN	26,547	12,676	4,191	5,335	2,258	892	13,871	6,028	6,057	1,648	138
NATIONAL SCIENCE FOUNDATION.......	14,857	1,042	68	484	132	358	13,815	478	5,745	516	7,076
OFFICE OF EMERGENCY PREPAREDNESS..	8	3	-	3	-	-	5	-	-	5	-
OFFICE OF SCIENCE AND TECHNOLOGY..	120	120	30	60	10	20	-	-	-	-	-
SMALL BUSINESS ADMINISTRATION.....	3	3	3	-	-	-	-	-	-	-	-
SMITHSONIAN INSTITUTION...........	1,934	1,909	1,133	606	90	80	25	-	-	25	-
TENNESSEE VALLEY AUTHORITY........	110	110	-	110	-	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGCY	214	214	166	47	1	-	-	-	-	-	-
VETERANS ADMINISTRATION...........	6,000	5,960	590	3,000	2,100	270	40	15	-	25	-

TABLE D-8. FEDERAL INTRAMURAL AND EXTRAMURAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRAMURAL					EXTRAMURAL				
		TOTAL	PUBLICATION AND DISTRIB.	DOC, REF, & INFO. SERVICE	SYMPOSIA & AUDIO/ VISUAL	R&D IN INFO. SCIENCE	TOTAL	PUBLICATION AND DISTRIB.	DOC, REF, & INFO. SERVICE	SYMPOSIA & AUDIO/ VISUAL	R&D IN INFO. SCIENCE
TOTAL, ALL AGENCIES	400,408	268,142	86,405	140,217	24,009	17,511	132,266	20,668	50,298	11,337	49,963
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL	10,700	10,340	3,520	4,843	1,864	113	360	-	203	-	157
AGRICULTURAL RESEARCH SERVICE	3,379	3,379	1,827	802	750	-	-	-	-	-	-
COOPERATIVE STATE RESEARCH SERVICE	124	124	9	-	114	1	-	-	-	-	-
ECONOMIC RESEARCH SERVICE	387	387	323	12	52	-	-	-	-	-	-
FARMER COOPERATIVE SERVICE	48	48	48	-	-	-	-	-	-	-	-
FOREST SERVICE	2,677	2,677	1,306	423	938	10	-	-	-	-	-
NATIONAL AGRICULTURAL LIBRARY	4,078	3,718	-	3,606	10	102	360	-	203	-	157
STATISTICAL REPORTING SERVICE	7	7	7	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL	68,404	67,288	46,615	18,407	773	1,493	1,116	380	618	73	45
BUREAU OF THE CENSUS	469	457	225	67	27	138	12	-	-	12	-
NATIONAL BUREAU OF STANDARDS	11,165	10,558	1,177	8,057	608	716	607	5	586	6	10
NATIONAL OCEANIC AND ATMOS. ADMIN.	3,940	3,443	1,955	1,299	138	51	497	375	32	55	35
OFFICE OF BUSINESS ECONOMICS	180	180	180	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS	28	28	-	-	-	28	-	-	-	-	-
PATENT OFFICE	52,622	52,622	43,078	8,984	-	560	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL	147,258	85,078	16,284	50,285	13,718	4,791	62,180	10,085	14,931	4,578	32,586
DEPARTMENT OF THE ARMY	69,807	55,989	10,067	35,304	9,509	1,109	13,818	2,504	8,696	2,342	276
DEPARTMENT OF THE NAVY	16,247	8,010	2,160	3,100	1,480	1,270	8,237	2,632	2,325	1,960	1,320
DEPARTMENT OF THE AIR FORCE	18,513	8,868	3,340	2,023	2,543	962	9,645	4,671	2,455	229	2,290
DEFENSE AGENCIES	42,676	12,211	717	9,858	186	1,450	30,465	278	1,440	47	28,700
DEPARTMENTWIDE FUNDS	15	-	-	-	-	-	15	-	15	-	-
DEPT HEALTH, ED, & WELFARE, TOTAL	72,350	37,473	4,295	25,794	2,162	5,222	34,877	2,221	19,334	3,796	9,526
FOOD AND DRUG ADMINISTRATION	5,367	2,332	257	1,995	58	22	3,035	100	2,830	-	105
HEALTH SERV & MENTAL HEALTH ADM	8,859	3,538	1,631	1,668	224	15	5,321	884	1,260	883	2,294
NATIONAL INSTITUTES OF HEALTH	40,143	23,493	1,944	14,553	1,811	5,185	16,650	1,237	10,044	963	4,406
OFFICE OF EDUCATION	17,649	7,778	200	7,578	-	-	9,871	-	5,200	1,950	2,721
SOCIAL SECURITY ADMINISTRATION	332	332	263	-	69	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL	13,551	13,063	6,447	4,769	551	1,296	488				

AGRICULTURAL RESEARCH SERVICE.....	3,379	3,379	1,827	802	750	-	-	-	-	-	-
COOPERATIVE STATE RESEARCH SERVICE	124	124	9	-	114	1	-	-	-	-	-
ECONOMIC RESEARCH SERVICE.........	387	387	323	12	52	-	-	-	-	-	-
FARMER COOPERATIVE SERVICE........	48	48	48	-	-	-	-	-	-	-	-
FOREST SERVICE....................	2,677	2,677	1,306	423	938	10	-	-	-	-	-
NATIONAL AGRICULTURAL LIBRARY.....	4,078	3,718	-	3,606	10	102	360	-	203	-	157
STATISTICAL REPORTING SERVICE.....	7	7	7	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL.....	68,404	67,288	46,615	18,407	773	1,493	1,116	380	618	73	45
BUREAU OF THE CENSUS..............	469	457	225	67	27	138	12	-	-	12	-
NATIONAL BUREAU OF STANDARDS......	11,165	10,558	1,177	8,057	608	716	607	5	586	6	10
NATIONAL OCEANIC AND ATMOS. ADMIN.	3,940	3,443	1,955	1,299	138	51	497	375	32	55	35
OFFICE OF BUSINESS ECONOMICS......	180	180	180	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS......	28	28	-	-	-	28	-	-	-	-	-
PATENT OFFICE.....................	52,622	52,622	43,078	8,984	-	560	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL......	147,258	85,078	16,284	50,285	13,718	4,791	62,180	10,085	14,931	4,578	32,586
DEPARTMENT OF THE ARMY............	69,807	55,989	10,067	35,304	9,509	1,109	13,818	2,504	8,696	2,342	276
DEPARTMENT OF THE NAVY............	16,247	8,010	2,160	3,100	1,480	1,270	8,237	2,632	2,325	1,960	1,320
DEPARTMENT OF THE AIR FORCE.......	18,513	8,868	3,340	2,023	2,543	962	9,645	4,671	2,455	229	2,290
DEFENSE AGENCIES..................	42,676	12,211	717	9,858	186	1,450	30,465	278	1,440	47	28,700
DEPARTMENTWIDE FUNDS..............	15	-	-	-	-	-	15	-	15	-	-
DEPT HEALTH, ED, & WELFARE, TOTAL.	72,350	37,473	4,295	25,794	2,162	5,222	34,877	2,221	19,334	3,796	9,526
FOOD AND DRUG ADMINISTRATION......	5,367	2,332	257	1,995	58	22	3,035	100	2,830	-	105
HEALTH SERV & MENTAL HEALTH ADM...	8,859	3,538	1,631	1,668	224	15	5,321	884	1,260	883	2,294
NATIONAL INSTITUTES OF HEALTH.....	40,143	23,493	1,944	14,553	1,811	5,185	16,650	1,237	10,044	963	4,406
OFFICE OF EDUCATION...............	17,649	7,778	200	7,578	-	-	9,871	-	5,200	1,950	2,721
SOCIAL SECURITY ADMINISTRATION....	332	332	263	-	69	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL.	13,551	13,063	6,447	4,769	551	1,296	488	41	435	12	-
BUREAU OF MINES...................	834	834	474	260	100	-	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION......	19	19	12	7	-	-	-	-	-	-	-
BUREAU OF RECLAMATION.............	510	497	69	397	31	-	13	-	13	-	-
BUREAU OF SPORT FISH & WILDLIFE...	768	633	273	225	135	-	135	-	135	-	-
OFFICE OF LIBRARY SERVICES........	912	912	-	908	4	-	-	-	-	-	-
GEOLOGICAL SURVEY.................	9,538	9,538	5,559	2,412	271	1,296	-	-	-	-	-
OFFICE OF COAL RESEARCH...........	18	-	-	-	-	-	18	16	-	2	-
OFFICE OF SALINE WATER............	136	101	60	31	10	-	35	25	-	10	-
OFFICE OF WATER RESOURCES RESEARCH	816	529	-	529	-	-	287	-	287	-	-
DEPARTMENT OF JUSTICE, TOTAL......	50	-	-	-	-	-	50	-	-	50	-
LAW ENFORCEMENT ASSISTANCE ADMIN..	50	-	-	-	-	-	50	-	-	50	-
DEPARTMENT OF LABOR, TOTAL........	132	132	92	40	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION...........	132	132	92	40	-	-	-	-	-	-	-
POSTAL SERVICE....................	32	2	-	-	-	2	30	-	-	-	30
DEPARTMENT OF STATE, TOTAL........	2,273	1,663	-	1,663	-	-	610	572	-	38	-
DEPARTMENTAL FUNDS................	107	107	-	107	-	-	-	-	-	-	-
AGENCY FOR INTERNATIONAL DEVELOP..	2,166	1,556	-	1,556	-	-	610	572	-	38	-
DEPT. OF TRANSPORTATION, TOTAL....	3,876	2,331	101	2,072	58	100	1,545	135	1,360	-	50
FEDERAL AVIATION ADMINISTRATION...	486	410	26	356	28	-	76	21	55	-	-
FEDERAL HIGHWAY ADMINISTRATION....	1,435	355	75	250	30	-	1,080	80	1,000	-	-
NAT'L HIGHWAY TRAFFIC SAFETY ADMIN	341	205	-	205	-	-	136	30	106	-	-
OFFICE OF THE SECRETARY...........	1,198	945	-	845	-	100	253	4	199	-	50
UNITED STATES COAST GUARD.........	416	416	-	416	-	-	-	-	-	-	-
OTHER AGENCIES											
ACVIS COMM ON INTERGOVT RELATIONS.	62	62	33	25	4	-	-	-	-	-	-
ATOMIC ENERGY COMMISSION..........	4,933	3,121	1,803	1,318	-	-	1,812	760	988	64	-
ENVIRONMENTAL PROTECTION AGENCY...	3,147	1,789	859	543	225	162	1,358	135	887	129	207
FEDERAL COMMUNICATIONS COMMISSION.	16	16	5	5	6	-	-	-	-	-	-
FEDERAL HOME LOAN BANK BOARD......	32	32	-	32	-	-	-	-	-	-	-
LIBRARY OF CONGRESS...............	22,992	22,992	-	20,464	13	2,515	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	26,894	12,936	4,284	5,421	2,266	965	13,958	5,657	6,086	1,973	242
NATIONAL SCIENCE FOUNDATION.......	15,037	1,230	78	577	133	442	13,807	667	5,456	564	7,120
OFFICE OF EMERGENCY PREPAREDNESS..	8	3	-	3	-	-	5	-	-	5	-
OFFICE OF SCIENCE AND TECHNOLOGY..	140	140	40	70	10	20	-	-	-	-	-
SMITHSONIAN INSTITUTION...........	2,064	2,034	1,175	669	100	90	30	-	-	30	-
TENNESSEE VALLEY AUTHORITY........	116	116	-	116	-	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGCY	241	241	174	51	1	15	-	-	-	-	-
VETERANS ADMINISTRATION...........	6,100	6,060	600	3,050	2,125	285	40	15	-	25	-

TABLE D-9. FEDERAL INTRAMURAL AND EXTRAMURAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	TOTAL	INTRAMURAL					EXTRAMURAL				
		TOTAL	PUBLICA-TION AND DISTRIB.	DOC,REF, & INFO. SERVICE	SYMPOSIA & AUDIO/VISUAL	R&D IN INFO. SCIENCE	TOTAL	PUBLICA-TION AND DISTRIB.	DOC,REF, & INFO. SERVICE	SYMPOSIA & AUDIO/VISUAL	R&D IN INFO. SCIENCE
TOTAL, ALL AGENCIES..............	413,049	277,859	89,853	143,971	24,372	19,663	135,190	20,849	47,267	12,302	54,772
DEPARTMENTS											
DEPARTMENT OF AGRICULTURE, TOTAL..	10,547	10,184	3,537	4,650	1,872	125	363	-	213	-	150
AGRICULTURAL RESEARCH SERVICE.....	3,379	3,379	1,827	802	750	-	-	-	-	-	-
COOPERATIVE STATE RESEARCH SERVICE	124	124	9	-	114	1	-	-	-	-	-
ECONOMIC RESEARCH SERVICE.........	392	392	327	13	52	-	-	-	-	-	-
FARMER COOPERATIVE SERVICE........	50	50	50	-	-	-	-	-	-	-	-
FOREST SERVICE....................	2,699	2,699	1,316	426	946	11	-	-	-	-	-
NATIONAL AGRICULTURAL LIBRARY.....	3,895	3,532	-	3,409	10	113	363	-	213	-	150
STATISTICAL REPORTING SERVICE.....	8	8	8	-	-	-	-	-	-	-	-
DEPARTMENT OF COMMERCE, TOTAL.....	71,850	70,756	48,885	19,391	855	1,625	1,094	360	626	18	90
BUREAU OF THE CENSUS..............	469	457	225	67	27	138	12	-	-	12	-
NATIONAL BUREAU OF STANDARDS......	12,023	11,407	1,254	8,761	699	693	616	10	590	6	10
NATIONAL OCEANIC AND ATMOS. ADMIN.	4,282	3,816	2,087	1,543	129	57	466	350	36	-	80
OFFICE OF BUSINESS ECONOMICS......	190	190	190	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS......	162	162	-	-	-	162	-	-	-	-	-
PATENT OFFICE.....................	54,724	54,724	45,129	9,020	-	575	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL......	149,954	85,709	16,503	50,361	13,794	5,051	64,245	10,293	13,214	4,788	35,950
DEPARTMENT OF THE ARMY............	69,755	55,740	10,028	35,132	9,463	1,117	14,015	2,586	8,739	2,414	276
DEPARTMENT OF THE NAVY............	16,850	8,170	2,280	2,960	1,570	1,360	8,680	2,790	2,420	2,070	1,400
DEPARTMENT OF THE AIR FORCE.......	17,220	9,268	3,478	2,145	2,620	1,025	7,952	4,634	595	249	2,474
DEFENSE AGENCIES..................	46,114	12,531	717	10,124	141	1,549	33,583	283	1,445	55	31,800
DEPARTMENTWIDE FUNDS..............	15	-	-	-	-	-	15	-	15	-	-
DEPT HEALTH, ED, & WELFARE, TOTAL.	67,866	30,795	4,384	18,910	2,169	5,332	37,071	2,396	19,452	4,298	10,925
FOOD AND DRUG ADMINISTRATION......	5,636	2,449	270	2,095	61	23	3,187	105	2,972	-	110
HEALTH SERV & MENTAL HEALTH ADM...	9,955	3,541	1,565	1,777	184	15	6,414	893	1,395	1,230	2,896
NATIONAL INSTITUTES OF HEALTH.....	40,179	23,519	2,067	14,308	1,850	5,294	16,660	1,398	9,875	1,018	4,369
OFFICE OF EDUCATION...............	11,730	920	190	730	-	-	10,810	-	5,210	2,050	3,550
SOCIAL SECURITY ADMINISTRATION....	366	366	292	-	74	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL.	13,987	13,532	6,636	4,971	599	1,326	455	43	398	14	-
BUREAU OF MINES...................	841	841	472	269	100	-	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION......	21	21	12	7	2	-	-	-	-	-	-
BUREAU OF RECLAMATION.............	503	490	72	387	31	-	13	-	13	-	-
BUREAU OF SPORT FISH & WILDLIFE...	813	678	284	231	163	-	135	-	135	-	-
OFFICE OF LIBRARY SERVICES........	912	912	-	908	4	-	-	-	-	-	-
GEOLOGICAL SURVEY.................	9,823	9,823	5,731	2,477	289	1,326	-	-	-	-	-
OFFICE OF COAL RESEARCH...........	22	-	-	-	-	-	22	18	-	4	-
OFFICE OF SALINE WATER............	140	105	65	30	10	-	35	25	-	10	-
OFFICE OF WATER RESOURCES RESEARCH	912	662	-	662	-	-	250	-	250	-	-
DEPARTMENT OF JUSTICE, TOTAL......	50	-	-	-	-	-	50	-	-	50	-
LAW ENFORCEMENT ASSISTANCE ADMIN..	50	-	-	-	-	-	50	-	-	50	-

DEPARTMENT OF COMMERCE, TOTAL.....	71,850	70,756	48,885	19,391	855	1,625	1,094	360	626	18	90
BUREAU OF THE CENSUS..............	469	457	225	67	27	138	12	-	-	12	-
NATIONAL BUREAU OF STANDARDS......	12,023	11,407	1,254	8,761	699	693	616	10	590	6	10
NATIONAL OCEANIC AND ATMOS. ADMIN.	4,282	3,816	2,087	1,543	129	57	466	350	36	-	80
OFFICE OF BUSINESS ECONOMICS......	190	190	190	-	-	-	-	-	-	-	-
OFFICE OF TELECOMMUNICATIONS......	162	162	-	-	-	162	-	-	-	-	-
PATENT OFFICE.....................	54,724	54,724	45,129	9,020	-	575	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL......	149,954	85,709	16,503	50,361	13,794	5,051	64,245	10,293	13,214	4,788	35,950
DEPARTMENT OF THE ARMY............	69,755	55,740	10,028	35,132	9,463	1,117	14,015	2,586	8,739	2,414	276
DEPARTMENT OF THE NAVY............	16,850	8,170	2,280	2,960	1,570	1,360	8,680	2,790	2,420	2,070	1,400
DEPARTMENT OF THE AIR FORCE.......	17,220	9,268	3,478	2,145	2,620	1,025	7,952	4,634	595	249	2,474
DEFENSE AGENCIES..................	46,114	12,531	717	10,124	141	1,549	33,583	283	1,445	55	31,800
DEPARTMENTWIDE FUNDS..............	15	-	-	-	-	-	15	-	15	-	-
DEPT HEALTH, ED, & WELFARE, TOTAL.	67,866	30,795	4,384	18,910	2,169	5,332	37,071	2,396	19,452	4,298	10,925
FOOD AND DRUG ADMINISTRATION......	5,636	2,449	270	2,095	61	23	3,187	105	2,972	-	110
HEALTH SERV & MENTAL HEALTH ADM...	9,955	3,541	1,565	1,777	184	15	6,414	893	1,395	1,230	2,896
NATIONAL INSTITUTES OF HEALTH.....	40,179	23,519	2,067	14,308	1,850	5,294	16,660	1,398	9,875	1,018	4,369
OFFICE OF EDUCATION...............	11,730	920	190	730	-	-	10,810	-	5,210	2,050	3,550
SOCIAL SECURITY ADMINISTRATION....	366	366	292	-	74	-	-	-	-	-	-
DEPARTMENT OF THE INTERIOR, TOTAL.	13,987	13,532	6,636	4,971	599	1,326	455	43	398	14	-
BUREAU OF MINES...................	841	841	472	269	100	-	-	-	-	-	-
BUREAU OF OUTDOOR RECREATION......	21	21	12	7	2	-	-	-	-	-	-
BUREAU OF RECLAMATION.............	503	490	72	387	31	-	13	-	13	-	-
BUREAU OF SPORT FISH & WILDLIFE...	813	678	284	231	163	-	135	-	135	-	-
OFFICE OF LIBRARY SERVICES........	912	912	-	908	4	-	-	-	-	-	-
GEOLOGICAL SURVEY.................	9,823	9,823	5,731	2,477	289	1,326	-	-	-	-	-
OFFICE OF COAL RESEARCH...........	22	-	-	-	-	-	22	18	-	4	-
OFFICE OF SALINE WATER............	140	105	65	30	10	-	35	25	-	10	-
OFFICE OF WATER RESOURCES RESEARCH	912	662	-	662	-	-	250	-	250	-	-
DEPARTMENT OF JUSTICE, TOTAL......	50	-	-	-	-	-	50	-	-	50	-
LAW ENFORCEMENT ASSISTANCE ADMIN..	50	-	-	-	-	-	50	-	-	50	-
DEPARTMENT OF LABOR, TOTAL........	132	132	92	40	-	-	-	-	-	-	-
MANPOWER ADMINISTRATION...........	132	132	92	40	-	-	-	-	-	-	-
DEPARTMENT OF STATE, TOTAL........	2,319	1,663	-	1,663	-	-	656	578	-	78	-
DEPARTMENTAL FUNDS................	107	107	-	107	-	-	-	-	-	-	-
AGENCY FOR INTERNATIONAL DEVELOP..	2,212	1,556	-	1,556	-	-	656	578	-	78	-
DEPT. OF TRANSPORTATION, TOTAL....	4,460	2,878	106	2,714	58	-	1,582	134	1,418	-	30
FEDERAL AVIATION ADMINISTRATION...	546	467	26	413	28	-	79	21	58	-	-
FEDERAL HIGHWAY ADMINISTRATION....	1,460	375	80	265	30	-	1,085	85	1,000	-	-
NAT'L HIGHWAY TRAFFIC SAFETY ADMIN	493	205	-	205	-	-	288	28	260	-	-
OFFICE OF THE SECRETARY...........	1,545	1,415	-	1,415	-	-	130	-	100	-	30
UNITED STATES COAST GUARD.........	416	416	-	416	-	-	-	-	-	-	-
OTHER AGENCIES											
ADVIS COMM ON INTERGOVT RELATIONS.	55	55	30	20	5	-	-	-	-	-	-
ATOMIC ENERGY COMMISSION..........	4,970	3,209	1,821	1,388	-	-	1,761	715	950	96	-
ENVIRONMENTAL PROTECTION AGENCY...	3,087	2,059	1,037	549	254	219	1,028	121	533	202	172
FEDERAL COMMUNICATIONS COMMISSION.	17	17	5	5	7	-	-	-	-	-	-
FEDERAL HOME LOAN BANK BOARD......	33	33	-	33	-	-	-	-	-	-	-
LIBRARY OF CONGRESS...............	32,444	32,444	-	28,515	13	3,916	-	-	-	-	-
NATIONAL AERONAUTICS & SPACE ADMIN	27,877	13,759	4,483	5,923	2,306	1,047	14,118	5,779	6,021	2,083	235
NATIONAL SCIENCE FOUNDATION.......	12,582	1,330	88	622	103	517	11,252	415	3,042	575	7,220
OFFICE OF EMERGENCY PREPAREDNESS..	3	3	-	3	-	-	-	-	-	-	-
OFFICE OF SCIENCE AND TECHNOLOGY..	150	150	40	70	10	30	-	-	-	-	-
SMALL BUSINESS ADMINISTRATION.....	5	5	5	-	-	-	-	-	-	-	-
SMITHSONIAN INSTITUTION...........	4,064	2,589	1,419	855	165	150	1,475	-	1,400	75	-
TENNESSEE VALLEY AUTHORITY........	123	123	-	123	-	-	-	-	-	-	-
US ARMS CONTROL & DISARMAMENT AGCY	274	274	182	65	2	25	-	-	-	-	-
VETERANS ADMINISTRATION...........	6,200	6,160	600	3,100	2,160	300	40	15	-	25	-

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statistical tables, part III

federal funds for collection of general-purpose scientific data

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NOTES

- Source of data is the National Science Foundation.
- Estimates for 1972 are based on **The Budget, FY 1972**, as submitted to Congress, and do not reflect subsequent appropriation and apportionment actions.
- The National Oceanic and Atmospheric Administration (NOAA) was established in fiscal year 1971 within the Department of Commerce. NOAA includes Commerce's Environmental Science Services Administration (ESSA), which is its largest component. It also has incorporated from Interior the Bureau of Commercial Fisheries, the marine sport fish activities of the Fish and Wildlife Service, and the Marine Minerals Technology Center of the Bureau of Mines. NOAA has taken over the Army Corps of Engineers' Great Lakes Survey and the Navy's National Oceanographic Data Center and National Oceanographic Instrumentation Center. From the Department of Transportation it has taken the data buoy development activities of the Coast Guard and from the National Science Foundation, its Sea Grant Programs. These agency subdivisions' general-purpose data collection activities are reported for fiscal year 1970 as though they had been part of NOAA that year.

TABLE E-1. SUMMARY OF FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

PERFORMER AND ACTIVITY	ACTUAL, 1970			ESTIMATES					
				1971			1972		
	TOTAL	NATURAL PHENOMENA	SOCIAL PHENOMENA	TOTAL	NATURAL PHENOMENA	SOCIAL PHENOMENA	TOTAL	NATURAL PHENOMENA	SOCIAL PHENOMENA
TOTAL OBLIGATIONS FOR COLLECTION OF GENERAL PURPOSE SCIENTIFIC DATA......	549,908	308,980	240,928	525,782	335,624	190,158	536,811	371,442	165,369
BY PERFORMER									
INTRAMURAL..........................	533,182	299,824	233,358	508,992	327,183	181,809	519,225	362,018	157,207
EXTRAMURAL..........................	16,726	9,156	7,570	16,790	8,441	8,349	17,586	9,424	8,162
BY ACTIVITY									
GATHERING, PROCESSING AND COLLATING.	397,799	183,559	214,240	356,807	200,486	156,321	356,071	224,777	131,294
ANALYSIS............................	50,573	36,275	14,298	56,980	40,624	16,356	62,064	44,788	17,276
PUBLICATION.........................	41,781	35,652	6,129	51,972	43,308	8,664	55,503	45,477	10,026
EQUIPMENT FOR DATA GATHERING, PROCESSING AND COLLATING..........	59,755	53,494	6,261	60,023	51,206	8,817	63,173	56,400	6,773

TABLE E-2. FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	ACTUAL, 1970	ESTIMATES	
		1971	1972
TOTAL, ALL AGENCIES	549,908	525,782	536,811
DEPARTMENTS			
DEPARTMENT OF AGRICULTURE, TOTAL	41,783	43,817	43,751
AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE	48	41	43
FARMER COOPERATIVE SERVICE	98	98	104
SOIL CONSERVATION SERVICE	23,467	25,727	25,437
STATISTICAL REPORTING SERVICE	18,170	17,951	18,167
DEPARTMENT OF COMMERCE, TOTAL	311,388	274,036	266,095
BUREAU OF THE CENSUS	147,570	86,356	50,563
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	163,818	187,680	215,532
DEPARTMENT OF DEFENSE, TOTAL	67,361	63,854	69,154
DEPARTMENT OF THE ARMY	4,558	4,482	5,003
DEPARTMENT OF THE NAVY	62,803	59,372	64,151
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	14,735	19,534	22,966
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	9,499	12,837	15,701
NATIONAL INSTITUTES OF HEALTH	130	304	314
OFFICE OF EDUCATION	4,497	5,621	5,990
SOCIAL SECURITY ADMINISTRATION	609	772	961
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	767	600	1,700
DEPARTMENT OF THE INTERIOR, TOTAL	50,731	53,936	56,345
BUREAU OF LAND MANAGEMENT	33	40	42
BUREAU OF MINES	4,003	4,138	4,223
BUREAU OF OUTDOOR RECREATION	15	25	30
GEOLOGICAL SURVEY	46,680	49,733	52,050
DEPARTMENT OF JUSTICE, TOTAL	1,343	2,349	2,666
FEDERAL BUREAU OF INVESTIGATION	1,009	1,257	1,397
IMMIGRATION AND NATURALIZATION SERVICE	324	492	519
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION	10	600	750
DEPARTMENT OF LABOR, TOTAL	20,824	24,163	29,796

TOTAL, ALL AGENCIES	549,908	525,782	536,811
DEPARTMENTS			
DEPARTMENT OF AGRICULTURE, TOTAL	41,783	43,817	43,751
AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE	48	41	43
FARMER COOPERATIVE SERVICE	98	98	104
SOIL CONSERVATION SERVICE	23,467	25,727	25,437
STATISTICAL REPORTING SERVICE	18,170	17,951	18,167
DEPARTMENT OF COMMERCE, TOTAL	311,388	274,036	266,095
BUREAU OF THE CENSUS	147,570	86,356	50,563
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	163,818	187,680	215,532
DEPARTMENT OF DEFENSE, TOTAL	67,361	63,854	69,154
DEPARTMENT OF THE ARMY	4,558	4,482	5,003
DEPARTMENT OF THE NAVY	62,803	59,372	64,151
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	14,735	19,534	22,966
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	9,499	12,837	15,701
NATIONAL INSTITUTES OF HEALTH	130	304	314
OFFICE OF EDUCATION	4,497	5,621	5,990
SOCIAL SECURITY ADMINISTRATION	609	772	961
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	767	600	1,700
DEPARTMENT OF THE INTERIOR, TOTAL	50,731	53,936	56,345
BUREAU OF LAND MANAGEMENT	33	40	42
BUREAU OF MINES	4,003	4,138	4,223
BUREAU OF OUTDOOR RECREATION	15	25	30
GEOLOGICAL SURVEY	46,680	49,733	52,050
DEPARTMENT OF JUSTICE, TOTAL	1,343	2,349	2,666
FEDERAL BUREAU OF INVESTIGATION	1,009	1,257	1,397
IMMIGRATION AND NATURALIZATION SERVICE	324	492	519
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION	10	600	750
DEPARTMENT OF LABOR, TOTAL	20,824	24,163	29,796
BUREAU OF LABOR STATISTICS	20,824	24,163	29,796
DEPARTMENT OF STATE, TOTAL	475	538	405
DEPARTMENTAL FUNDS	125	146	146
AGENCY FOR INTERNATIONAL DEVELOPMENT	350	392	259
DEPARTMENT OF TRANSPORTATION, TOTAL	21,047	22,839	24,488
FEDERAL AVIATION ADMINISTRATION	12,809	13,705	14,694
UNITED STATES COAST GUARD	8,238	9,134	9,794
DEPARTMENT OF THE TREASURY, TOTAL	6,799	7,060	7,016
INTERNAL REVENUE SERVICE	6,799	7,060	7,016
OTHER AGENCIES			
FEDERAL COMMUNICATIONS COMMISSION	24	28	31
FEDERAL HOME LOAN BANK BOARD	1,078	1,438	1,841
FEDERAL POWER COMMISSION	1,305	1,537	1,606
FEDERAL TRADE COMMISSION	373	349	422
NATIONAL SCIENCE FOUNDATION	2,675	2,498	1,187
OFFICE OF ECONOMIC OPPORTUNITY	6,080	6,125	6,050
SECURITIES AND EXCHANGE COMMISSION	408	437	510
SMITHSONIAN INSTITUTION	11	37	127
TENNESSEE VALLEY AUTHORITY	567	467	493
UNITED STATES TARIFF COMMISSION	134	140	162

TABLE E-3. FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA, BY AGENCY, PHENOMENA, AND ACTIVITY, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	NATURAL PHENOMENA					SOCIAL PHENOMENA				
	TOTAL	GATHERING PROCESSING COLLATING	ANALYSIS	PUBLI-CATION	EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING	TOTAL	GATHERING PROCESSING COLLATING	ANALYSIS	PUBLI-CATION	EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING
TOTAL, ALL AGENCIES....................	308,980	183,559	36,275	35,652	53,494	240,928	214,240	14,298	6,129	6,261
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	23,467	19,897	781	2,424	365	18,316	12,991	4,195	924	206
AGRI STABILIZATION & CONSERVATION SERV.	-	-	-	-	-	48	9	15	24	-
FARMER COOPERATIVE SERVICE.............	-	-	-	-	-	98	48	48	2	-
SOIL CONSERVATION SERVICE..............	23,467	19,897	781	2,424	365	-	-	-	-	-
STATISTICAL REPORTING SERVICE..........	-	-	-	-	-	18,170	12,934	4,132	898	206
DEPARTMENT OF COMMERCE, TOTAL..........	163,818	109,758	22,935	19,658	11,467	147,570	144,069	511	1,326	1,664
BUREAU OF THE CENSUS...................	-	-	-	-	-	147,570	144,069	511	1,326	1,664
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	163,818	109,758	22,935	19,658	11,467	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	66,133	13,925	5,878	8,113	38,217	1,228	1,044	25	61	98
DEPARTMENT OF THE ARMY.................	3,330	2,265	466	366	233	1,228	1,044	25	61	98
DEPARTMENT OF THE NAVY.................	62,803	11,660	5,412	7,747	37,984	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	-	-	-	-	-	14,735	11,991	1,637	489	618
HEALTH SERVICES & MENTAL HEALTH ADMIN..	-	-	-	-	-	9,499	8,344	803	302	50
NATIONAL INSTITUTES OF HEALTH..........	-	-	-	-	-	130	120	6	2	2
OFFICE OF EDUCATION....................	-	-	-	-	-	4,497	2,937	828	170	562
SOCIAL SECURITY ADMINISTRATION.........	-	-	-	-	-	609	590	-	15	4
DEPARTMENT OF HOUSING & URBAN DEVELOP..	-	-	-	-	-	767	345	230	192	-
DEPARTMENT OF THE INTERIOR, TOTAL......	46,680	31,471	6,551	5,213	3,445	4,051	2,692	686	548	125
BUREAU OF LAND MANAGEMENT..............	-	-	-	-	-	33	27	-	6	-
BUREAU OF MINES........................	-	-	-	-	-	4,003	2,655	686	537	125
BUREAU OF OUTDOOR RECREATION...........	-	-	-	-	-	15	10	-	5	-
GEOLOGICAL SURVEY......................	46,680	31,471	6,551	5,213	3,445	-	-	-	-	-
DEPARTMENT OF JUSTICE, TOTAL...........	-	-	-	-	-	1,343	932	163	128	120
FEDERAL BUREAU OF INVESTIGATION........	-	-	-	-	-	1,009	666	144	117	82
IMMIGRATION & NATURALIZATION SERVICE...	-	-	-	-	-	324	266	19	1	38
LAW ENFORCEMENT ASSISTANCE ADMIN.......	-	-	-	-	-	10	-	-	10	-
DEPARTMENT OF LABOR, TOTAL.............	-	-	-	-	-	20,824	15,849	3,840	752	383
BUREAU OF LABOR STATISTICS.............	-	-	-	-	-	20,824	15,849	3,840	752	383
DEPARTMENT OF STATE, TOTAL.............	66	66	-	-	-	409	389	-	20	-
DEPARTMENTAL FUNDS.....................	-	-	-	-	-	125	105	-	20	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	66	66	-	-	-	284	284	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	8,238	8,238	-	-	-	12,809	11,867	516	293	133
FEDERAL AVIATION ADMINISTRATION........	-	-	-	-	-	12,809	11,867	516	293	133
UNITED STATES COAST GUARD..............	8,238	8,238	-	-	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL......	-	-	-	-	-	6,799	5,639	656	196	308

SOCIAL SECURITY ADMINISTRATION..........										
DEPARTMENT OF HOUSING & URBAN DEVELOP..	-	-	-	-	-	767	345	230	192	-
DEPARTMENT OF THE INTERIOR, TOTAL......	46,680	31,471	6,551	5,213	3,445	4,051	2,692	686	548	125
BUREAU OF LAND MANAGEMENT..............	-	-	-	-	-	33	27	-	6	-
BUREAU OF MINES........................	-	-	-	-	-	4,003	2,655	686	537	125
BUREAU OF OUTDOOR RECREATION...........	-	-	-	-	-	15	10	-	5	-
GEOLOGICAL SURVEY......................	46,680	31,471	6,551	5,213	3,445	-	-	-	-	-
DEPARTMENT OF JUSTICE, TOTAL...........	-	-	-	-	-	1,343	932	163	128	120
FEDERAL BUREAU OF INVESTIGATION........	-	-	-	-	-	1,009	666	144	117	82
IMMIGRATION & NATURALIZATION SERVICE...	-	-	-	-	-	324	266	19	1	38
LAW ENFORCEMENT ASSISTANCE ADMIN.......	-	-	-	-	-	10	-	-	10	-
DEPARTMENT OF LABOR, TOTAL.............	-	-	-	-	-	20,824	15,849	3,840	752	383
BUREAU OF LABOR STATISTICS.............	-	-	-	-	-	20,824	15,849	3,840	752	383
DEPARTMENT OF STATE, TOTAL.............	66	66	-	-	-	409	389	-	20	-
DEPARTMENTAL FUNDS.....................	-	-	-	-	-	125	105	-	20	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	66	66	-	-	-	284	284	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	8,238	8,238	-	-	-	12,809	11,867	516	293	133
FEDERAL AVIATION ADMINISTRATION........	-	-	-	-	-	12,809	11,867	516	293	133
UNITED STATES COAST GUARD..............	8,238	8,238	-	-	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL......	-	-	-	-	-	6,799	5,639	656	196	308
INTERNAL REVENUE SERVICE...............	-	-	-	-	-	6,799	5,639	656	196	308
OTHER AGENCIES										
FEDERAL COMMUNICATIONS COMMISSION......	-	-	-	-	-	24	18	3	3	-
FEDERAL HOME LOAN BANK BOARD...........	-	-	-	-	-	1,078	786	196	96	-
FEDERAL POWER COMMISSION...............	-	-	-	-	-	1,305	776	388	129	12
FEDERAL TRADE COMMISSION...............	-	-	-	-	-	373	352	15	6	-
NATIONAL SCIENCE FOUNDATION............	-	-	-	-	-	2,675	1,612	784	279	-
OFFICE OF ECONOMIC OPPORTUNITY.........	-	-	-	-	-	6,080	2,489	410	650	2,531
SECURITIES AND EXCHANGE COMMISSION.....	-	-	-	-	-	408	335	-	10	63
SMITHSONIAN INSTITUTION................	11	11	-	-	-	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY.............	567	193	130	244	-	-	-	-	-	-
UNITED STATES TARIFF COMMISSION........	-	-	-	-	-	134	64	43	27	-

TABLE E-4. FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA, BY AGENCY, PHENOMENA, AND ACTIVITY, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	NATURAL PHENOMENA					SOCIAL PHENOMENA				
	TOTAL	GATHERING PROCESSING COLLATING	ANALYSIS	PUBLI-CATION	EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING	TOTAL	GATHERING PROCESSING COLLATING	ANALYSIS	PUBLI-CATION	EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING
TOTAL, ALL AGENCIES....................	335,624	200,486	40,624	43,308	51,206	190,158	156,321	16,356	8,664	8,817
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	25,727	19,754	857	4,693	423	18,090	12,847	4,148	908	187
AGRI STABILIZATION & CONSERVATION SERV.	-	-	-	-	-	41	8	14	19	-
FARMER COOPERATIVE SERVICE.............	-	-	-	-	-	98	48	48	2	-
SOIL CONSERVATION SERVICE..............	25,727	19,754	857	4,693	423	-	-	-	-	-
STATISTICAL REPORTING SERVICE..........	-	-	-	-	-	17,951	12,791	4,086	887	187
DEPARTMENT OF COMMERCE, TOTAL..........	187,680	125,746	26,275	22,522	13,137	86,356	79,296	672	2,739	3,649
BUREAU OF THE CENSUS...................	-	-	-	-	-	86,356	79,296	672	2,739	3,649
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	187,680	125,746	26,275	22,522	13,137	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	62,624	11,889	6,295	10,212	34,228	1,230	1,045	25	61	99
DEPARTMENT OF THE ARMY.................	3,252	2,211	455	358	228	1,230	1,045	25	61	99
DEPARTMENT OF THE NAVY.................	59,372	9,678	5,840	9,854	34,000	-	-	-	-	-
DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL	-	-	-	-	-	19,534	15,531	1,965	869	1,169
HEALTH SERVICES & MENTAL HEALTH ADMIN..	-	-	-	-	-	12,837	10,729	894	656	558
NATIONAL INSTITUTES OF HEALTH..........	-	-	-	-	-	304	288	11	3	2
OFFICE OF EDUCATION....................	-	-	-	-	-	5,621	3,757	1,060	200	604
SOCIAL SECURITY ADMINISTRATION.........	-	-	-	-	-	772	757	-	10	5
DEPARTMENT OF HOUSING & URBAN DEVELOP..	-	-	-	-	-	600	250	200	150	-
DEPARTMENT OF THE INTERIOR, TOTAL......	49,733	33,607	7,045	5,665	3,416	4,203	2,763	703	587	150
BUREAU OF LAND MANAGEMENT..............	-	-	-	-	-	40	33	-	7	-
BUREAU OF MINES........................	-	-	-	-	-	4,138	2,715	703	570	150
BUREAU OF OUTDOOR RECREATION...........	-	-	-	-	-	25	15	-	10	-
GEOLOGICAL SURVEY......................	49,733	33,607	7,045	5,665	3,416	-	-	-	-	-
DEPARTMENT OF JUSTICE, TOTAL...........	-	-	-	-	-	2,349	1,212	195	736	206
FEDERAL BUREAU OF INVESTIGATION........	-	-	-	-	-	1,257	779	175	135	168
IMMIGRATION & NATURALIZATION SERVICE...	-	-	-	-	-	492	433	20	1	38
LAW ENFORCEMENT ASSISTANCE ADMIN.......	-	-	-	-	-	600	-	-	600	-
DEPARTMENT OF LABOR, TOTAL.............	-	-	-	-	-	24,163	17,912	5,111	875	265
BUREAU OF LABOR STATISTICS.............	-	-	-	-	-	24,163	17,912	5,111	875	265
DEPARTMENT OF STATE, TOTAL.............	69	69	-	-	-	469	453	-	16	-

		-	-	-	-	86,356	79,296	672	2,739	3,649
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	187,680	125,746	26,275	22,522	13,137	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL	62,624	11,889	6,295	10,212	34,228	1,230	1,045	25	61	99
DEPARTMENT OF THE ARMY	3,252	2,211	455	358	228	1,230	1,045	25	61	99
DEPARTMENT OF THE NAVY	59,372	9,678	5,840	9,854	34,000	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	-	-	-	-	-	19,534	15,531	1,965	869	1,169
HEALTH SERVICES & MENTAL HEALTH ADMIN.	-	-	-	-	-	12,837	10,729	894	656	558
NATIONAL INSTITUTES OF HEALTH	-	-	-	-	-	304	288	11	3	2
OFFICE OF EDUCATION	-	-	-	-	-	5,621	3,757	1,060	200	604
SOCIAL SECURITY ADMINISTRATION	-	-	-	-	-	772	757	-	10	5
DEPARTMENT OF HOUSING & URBAN DEVELOP.	-	-	-	-	-	600	250	200	150	-
DEPARTMENT OF THE INTERIOR, TOTAL	49,733	33,607	7,045	5,665	3,416	4,203	2,763	703	587	150
BUREAU OF LAND MANAGEMENT	-	-	-	-	-	40	33	-	7	-
BUREAU OF MINES	-	-	-	-	-	4,138	2,715	703	570	150
BUREAU OF OUTDOOR RECREATION	-	-	-	-	-	25	15	-	10	-
GEOLOGICAL SURVEY	49,733	33,607	7,045	5,665	3,416	-	-	-	-	-
DEPARTMENT OF JUSTICE, TOTAL	-	-	-	-	-	2,349	1,212	195	736	206
FEDERAL BUREAU OF INVESTIGATION	-	-	-	-	-	1,257	779	175	135	168
IMMIGRATION & NATURALIZATION SERVICE	-	-	-	-	-	492	433	20	1	38
LAW ENFORCEMENT ASSISTANCE ADMIN.	-	-	-	-	-	600	-	-	600	-
DEPARTMENT OF LABOR, TOTAL	-	-	-	-	-	24,163	17,912	5,111	875	265
BUREAU OF LABOR STATISTICS	-	-	-	-	-	24,163	17,912	5,111	875	265
DEPARTMENT OF STATE, TOTAL	69	69	-	-	-	469	453	-	16	-
DEPARTMENTAL FUNDS	-	-	-	-	-	146	130	-	16	-
AGENCY FOR INTERNATIONAL DEVELOPMENT	69	69	-	-	-	323	323	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL	9,134	9,134	-	-	-	13,705	12,705	468	348	184
FEDERAL AVIATION ADMINISTRATION	-	-	-	-	-	13,705	12,705	468	348	184
UNITED STATES COAST GUARD	9,134	9,134	-	-	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL	-	-	-	-	-	7,060	5,835	740	175	310
INTERNAL REVENUE SERVICE	-	-	-	-	-	7,060	5,835	740	175	310
OTHER AGENCIES										
FEDERAL COMMUNICATIONS COMMISSION	-	-	-	-	-	28	20	4	4	-
FEDERAL HOME LOAN BANK BOARD	-	-	-	-	-	1,438	1,048	262	128	-
FEDERAL POWER COMMISSION	153	91	45	15	2	1,384	818	409	136	21
FEDERAL TRADE COMMISSION	-	-	-	-	-	349	328	15	6	-
NATIONAL SCIENCE FOUNDATION	-	-	-	-	-	2,498	1,190	1,034	274	-
OFFICE OF ECONOMIC OPPORTUNITY	-	-	-	-	-	6,125	2,643	360	610	2,512
SECURITIES AND EXCHANGE COMMISSION	-	-	-	-	-	437	360	-	12	65
SMITHSONIAN INSTITUTION	37	37	-	-	-	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY	467	159	107	201	-	-	-	-	-	-
UNITED STATES TARIFF COMMISSION	-	-	-	-	-	140	65	45	30	-

TABLE E-5. FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA, BY AGENCY, PHENOMENA, AND ACTIVITY, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	NATURAL PHENOMENA					SOCIAL PHENOMENA				
	TOTAL	GATHERING PROCESSING COLLATING	ANALYSIS	PUBLI-CATION	EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING	TOTAL	GATHERING PROCESSING COLLATING	ANALYSIS	PUBLI-CATION	EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING
TOTAL, ALL AGENCIES....................	371,442	224,777	44,788	45,477	56,400	165,369	131,294	17,276	10,026	6,773
DEPARTMENTS										
DEPARTMENT OF AGRICULTURE, TOTAL.......	25,437	20,924	782	3,431	300	18,314	13,005	4,201	921	187
AGRI STABILIZATION & CONSERVATION SERV.	-	-	-	-	-	43	8	15	20	-
FARMER COOPERATIVE SERVICE.............	-	-	-	-	-	104	51	51	2	-
SOIL CONSERVATION SERVICE..............	25,437	20,924	782	3,431	300	-	-	-	-	-
STATISTICAL REPORTING SERVICE..........	-	-	-	-	-	18,167	12,946	4,135	899	187
DEPARTMENT OF COMMERCE, TOTAL..........	215,532	144,406	30,174	25,864	15,088	50,563	46,223	678	3,268	394
BUREAU OF THE CENSUS...................	-	-	-	-	-	50,563	46,223	678	3,268	394
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	215,532	144,406	30,174	25,864	15,088	-	-	-	-	-
DEPARTMENT OF DEFENSE, TOTAL...........	67,848	13,946	6,387	10,068	37,447	1,306	1,110	26	65	105
DEPARTMENT OF THE ARMY.................	3,697	2,514	517	407	259	1,306	1,110	26	65	105
DEPARTMENT OF THE NAVY.................	64,151	11,432	5,870	9,661	37,188	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	-	-	-	-	-	22,966	17,993	1,947	1,001	2,025
HEALTH SERVICES & MENTAL HEALTH ADMIN..	-	-	-	-	-	15,701	12,784	813	762	1,342
NATIONAL INSTITUTES OF HEALTH..........	-	-	-	-	-	314	293	14	4	3
OFFICE OF EDUCATION....................	-	-	-	-	-	5,990	3,970	1,120	225	675
SOCIAL SECURITY ADMINISTRATION.........	-	-	-	-	-	961	946	-	10	5
DEPARTMENT OF HOUSING & URBAN DEVELOP..	-	-	-	-	-	1,700	765	510	425	-
DEPARTMENT OF THE INTERIOR, TOTAL......	52,050	35,317	7,285	5,886	3,562	4,295	2,814	728	603	150
BUREAU OF LAND MANAGEMENT..............	-	-	-	-	-	42	34	-	8	-
BUREAU OF MINES........................	-	-	-	-	-	4,223	2,765	728	580	150
BUREAU OF OUTDOOR RECREATION...........	-	-	-	-	-	30	15	-	15	-
GEOLOGICAL SURVEY......................	52,050	35,317	7,285	5,886	3,562	-	-	-	-	-
DEPARTMENT OF JUSTICE, TOTAL...........	-	-	-	-	-	2,666	1,242	199	887	338
FEDERAL BUREAU OF INVESTIGATION........	-	-	-	-	-	1,397	784	177	136	300
IMMIGRATION & NATURALIZATION SERVICE...	-	-	-	-	-	519	458	22	1	38
LAW ENFORCEMENT ASSISTANCE ADMIN.......	-	-	-	-	-	750	-	-	750	-
DEPARTMENT OF LABOR, TOTAL.............	-	-	-	-	-	29,796	22,197	6,066	1,041	492
BUREAU OF LABOR STATISTICS.............	-	-	-	-	-	29,796	22,197	6,066	1,041	492
DEPARTMENT OF STATE, TOTAL.............	-	-	-	-	-	405	389	-	16	-
DEPARTMENTAL FUNDS.....................	-	-	-	-	-	146	130	-	16	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	-	-	-	-	-	259	259	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	9,794	9,794	-	-	-	14,694	13,640	499	369	186
FEDERAL AVIATION ADMINISTRATION........	-	-	-	-	-	14,694	13,640	499	369	186

DEPARTMENT OF DEFENSE, TOTAL...........	67,848	13,946	6,387	10,068	37,447	1,306	1,110	26	65	105
DEPARTMENT OF THE ARMY.................	3,697	2,514	517	407	259	1,306	1,110	26	65	105
DEPARTMENT OF THE NAVY.................	64,151	11,432	5,870	9,661	37,188	-	-	-	-	-
DEPT. OF HEALTH, EDUC, & WELFARE, TOTAL	-	-	-	-	-	22,966	17,993	1,947	1,001	2,025
HEALTH SERVICES & MENTAL HEALTH ADMIN..	-	-	-	-	-	15,701	12,784	813	762	1,342
NATIONAL INSTITUTES OF HEALTH..........	-	-	-	-	-	314	293	14	4	3
OFFICE OF EDUCATION....................	-	-	-	-	-	5,990	3,970	1,120	225	675
SOCIAL SECURITY ADMINISTRATION.........	-	-	-	-	-	961	946	-	10	5
DEPARTMENT OF HOUSING & URBAN DEVELOP..	-	-	-	-	-	1,700	765	510	425	-
DEPARTMENT OF THE INTERIOR, TOTAL......	52,050	35,317	7,285	5,886	3,562	4,295	2,814	728	603	150
BUREAU OF LAND MANAGEMENT..............	-	-	-	-	-	42	34	-	8	-
BUREAU OF MINES........................	-	-	-	-	-	4,223	2,765	728	580	150
BUREAU OF OUTDOOR RECREATION...........	-	-	-	-	-	30	15	-	15	-
GEOLOGICAL SURVEY......................	52,050	35,317	7,285	5,886	3,562	-	-	-	-	-
DEPARTMENT OF JUSTICE, TOTAL...........	-	-	-	-	-	2,666	1,242	199	887	338
FEDERAL BUREAU OF INVESTIGATION........	-	-	-	-	-	1,397	784	177	136	300
IMMIGRATION & NATURALIZATION SERVICE...	-	-	-	-	-	519	458	22	1	38
LAW ENFORCEMENT ASSISTANCE ADMIN.......	-	-	-	-	-	750	-	-	750	-
DEPARTMENT OF LABOR, TOTAL.............	-	-	-	-	-	29,796	22,197	6,066	1,041	492
BUREAU OF LABOR STATISTICS.............	-	-	-	-	-	29,796	22,197	6,066	1,041	492
DEPARTMENT OF STATE, TOTAL.............	-	-	-	-	-	405	389	-	16	-
DEPARTMENTAL FUNDS.....................	-	-	-	-	-	146	130	-	16	-
AGENCY FOR INTERNATIONAL DEVELOPMENT...	-	-	-	-	-	259	259	-	-	-
DEPARTMENT OF TRANSPORTATION, TOTAL....	9,794	9,794	-	-	-	14,694	13,640	499	369	186
FEDERAL AVIATION ADMINISTRATION........	-	-	-	-	-	14,694	13,640	499	369	186
UNITED STATES COAST GUARD..............	9,794	9,794	-	-	-	-	-	-	-	-
DEPARTMENT OF THE TREASURY, TOTAL......	-	-	-	-	-	7,016	5,732	756	228	300
INTERNAL REVENUE SERVICE...............	-	-	-	-	-	7,016	5,732	756	228	300
OTHER AGENCIES										
FEDERAL COMMUNICATIONS COMMISSION......	-	-	-	-	-	31	21	5	5	-
FEDERAL HOME LOAN BANK BOARD...........	-	-	-	-	-	1,841	1,342	335	164	-
FEDERAL POWER COMMISSION...............	161	95	47	16	3	1,445	853	427	142	23
FEDERAL TRADE COMMISSION...............	-	-	-	-	-	422	400	16	6	-
NATIONAL SCIENCE FOUNDATION............	-	-	-	-	-	1,187	471	482	234	-
OFFICE OF ECONOMIC OPPORTUNITY.........	-	-	-	-	-	6,050	2,600	350	600	2,500
SECURITIES AND EXCHANGE COMMISSION.....	-	-	-	-	-	510	423	-	14	73
SMITHSONIAN INSTITUTION................	127	127	-	-	-	-	-	-	-	-
TENNESSEE VALLEY AUTHORITY.............	493	168	113	212	-	-	-	-	-	-
UNITED STATES TARIFF COMMISSION........		-	-	-	-	162	74	51	37	-

TABLE E-6. FEDERAL EXTRAMURAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

AGENCY AND SUBDIVISION	NATURAL PHENOMENA			SOCIAL PHENOMENA		
	ACTUAL, 1970	ESTIMATES		ACTUAL, 1970	ESTIMATES	
		1971	1972		1971	1972
TOTAL, ALL AGENCIES	9,156	8,441	9,424	7,570	8,349	8,162
DEPARTMENTS						
DEPARTMENT OF AGRICULTURE, TOTAL	392	438	428	-	-	-
SOIL CONSERVATION SERVICE	392	438	428	-	-	-
DEPARTMENT OF COMMERCE, TOTAL	5,790	6,260	6,766	2,629	1,374	555
BUREAU OF THE CENSUS	-	-	-	2,629	1,374	555
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	5,790	6,260	6,766	-	-	-
DEPARTMENT OF DEFENSE, TOTAL	2,974	1,743	2,230	-	-	-
DEPARTMENT OF THE NAVY	2,974	1,743	2,230	-	-	-
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL	-	-	-	2,118	3,791	4,730
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION	-	-	-	270	501	1,180
NATIONAL INSTITUTES OF HEALTH	-	-	-	119	290	300
OFFICE OF EDUCATION	-	-	-	1,729	3,000	3,250
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	-	-	-	338	275	800
DEPARTMENT OF JUSTICE, TOTAL	-	-	-	6	514	516
IMMIGRATION AND NATURALIZATION SERVICE	-	-	-	6	14	16
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION	-	-	-	-	500	500
OTHER AGENCIES						
FEDERAL TRADE COMMISSION	-	-	-	15	15	16
NATIONAL SCIENCE FOUNDATION	-	-	-	1,457	1,310	515
OFFICE OF ECONOMIC OPPORTUNITY	-	-	-	1,007	1,070	1,030